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OHIO ENVIRONMENTAL
PROTECTION AGENCY
SOUTHEAST DISTRICT

43521 Mayhugh Hill Road
Twp.Hwy.88
Beallsville, Ohio 43716

American Energy Corporation

October 6, 2006

Ohio EPA
State of Ohio Environmental Protection Agency
Southeast District Office
2195 Front Street
Logan, OH 43183

Attention: Abbott Stevenson

Dear Ms. Abbot Stevenson:

Please find a copy of the Antidegradation page, 4 that you requested. Our Officers have changed since the previous submittal so I had to get the page resigned.

If you have any questions or need additional information please feel free to contact me at your convenience.

Sincerely,

Fred M. Blumling
Environmental/ Project Engineer

OhioEPA
State of Ohio Environmental Protection Agency

DIVISION OF SURFACE WATER

Antidegradation Addendum

In accordance with Ohio Administrative Code 3745-1-05 (Antidegradation), additional information may be required to complete your application for a permit to install or NPDES permit. For any application that may result in an increase in the level of pollutants being discharged (NPDES and/or PTI)or for which there might be activity taking place within a stream bed, the processing of the permit(s) may be required to go through procedures as outlined in the antidegradation rule. The rule outlines procedures for public notification and participation as well as procedures pertaining to the levels of review necessary. The levels of review necessary depend on the degradation being considered/requested. The rule also outlines exclusions from portions of the application and review requirements and waivers that the Director may grant as specified in Section 3745-1-05(D) of the rule. Please complete the following questions. The answers provided will allow the Ohio EPA to determine if additional information is needed. **All projects that require both an NPDES and PTI should submit both applications simultaneously to avoid going through the antidegradation process separately for each permit**.

A. **Applicant:** American Energy Corporation

Facility Owner: American Energy Corporation

Facility Location (city and county): Beallsville, Belmont/Monroe

Application or Plans Prepared By: Jack A. Hamilton & Associates, Inc.

Project Name: Century Mine, NPDES Permit Renewal

NPDES Permit Number (if applicable): OIL00091*GD

B. **Antidegradation Applicability**

Is the application for? (check as many as apply):

_____ Application with no direct surface water discharge (Projects that do not meet the applicability section of 3745-1-05(B)1, i.e., on-site disposal, extensions of sanitary sewers, spray irrigation, indirect discharger to POTW, etc.). (Complete Section E)

X Renewal NPDES application or PTI application with no requested increase in loading of currently permitted pollutants. (Complete Section E, Do not complete Sections C or D).

_____ PTI and NPDES application for a new wastewater treatment works that will discharge to a surface water. (Complete Sections C and E)

_____ An expansion/modification of an existing wastewater treatment works discharging to a surface water that will result in any of the following (PTI and NPDES):(Complete Sections C and E)

- addition of any pollutant not currently in the discharge, or
- an increase in mass or concentration of any pollutant currently in the discharge, or
- an increase in any current pollutant limitation in terms of mass or concentration.

Click to clear all entered information (on all 4 pages of this form) CLEAR

_____ PTI that involves placement of fill or installation of any portion of a sewerage system (i.e., sanitary sewers, pump stations, WWTP, etc.) within 150 feet of a stream bed. Please provide information requested on the stream evaluation addendum (i.e., number of stream crossings, fill placement, etc.) and complete Section E.

_____ Initial NPDES permit for an existing treatment works with a wastewater discharge prior to October 1, 1996. (Complete Sections D and E)

_____ Renewal NPDES permit or modification to an effective NPDES permit that will result in any of the following: (Complete Sections C and E)

- a new permit limitation for a pollutant that previously had no limitation, or
- an increase in any mass or concentration limitation of any pollutant that currently has a limitation.

C. Antidegradation Information

1. Does the PTI and/or NPDES permit application meet an exclusion as outlined by OAC 3745-1-05(D)(1) of the Antidegradation rule?

   _____ Yes (Complete Question C.2)

   _____ No (Complete Questions C.3 and C.4)

2. For projects that would be eligible for exclusions provide the following information:

   a. Provide justification for the exclusion.

   b. Identify the substances to be discharged, including the amount of regulated pollutants to be discharged in terms of mass and concentration.

   c. A description of any construction work, fill or other structures to occur or be placed in or near a stream bed.

3. Are you requesting a waiver as outlined by OAC 3745-1-05(D)(2-7) of the Antidegradation rule?

   _____ No

   _____ Yes

   If you wish to pursue one of the waivers, please identify the waiver and submit the necessary information to support the request. Depending on the waiver requested, the information required under question C.4 may be required to complete the application.

4. For all projects that do **not** qualify for an exclusion a report must accompany this application evaluating the preferred design alternative, non-degradation alternatives, minimal degradation alternatives, and mitigative techniques/measures for the design and operation of the activity. The information outlined below should be addressed in this report. If a waiver is requested, this section is still required.

   a. Describe the availability, cost effectiveness and technical feasibility of connecting to existing central or regional sewage collection and treatment facilities, including long range plans for

sewer service outlined in state or local water quality management planning documents and applicable facility planning documents.

b. List and describe all government and/or privately sponsored conservation projects that may have been or will be specifically targeted to improve water quality or enhance recreational opportunities on the affected water resource.

c. Provide a brief description below of all treatment/disposal alternatives evaluated for this application and their respective operational and maintenance needs. (If additional space is needed please attach additional sheets to the end of this addendum).

Preferred design alternative:

Non-degradation alternative(s):

Minimal degradation alternative(s):

Mitigative technique/measure(s):

At a minimum, the following information must be included in the report for each alternative evaluated.

d. Outline of the treatment/disposal system evaluated, including the costs associated with the equipment, installation, and continued operation and maintenance.

e. Identify the substances to be discharged, including the amount of regulated pollutants to be discharged in terms of mass and concentration.

f. Describe the reliability of the treatment/disposal system, including but not limited to the possibility of recurring operation and maintenance difficulties that would lead to increased degradation.

g. Describe any impacts to human health and the overall quality and value of the water resource.

h. Describe and provide an estimate of the important social and economic benefits to be realized through this proposed project. Include the number and types of jobs created and tax revenues generated.

i. Describe environmental benefits to be realized through this proposed project.

j. Describe and provide an estimate of the social and economic benefits that may be lost as a result of this project. Include the impacts on commercial and recreational use of the water resource.

k. Describe the environmental benefits lost as a result of this project. Include the impact on the aquatic life, wildlife, threatened or endangered species.

l. A description of any construction work, fill or other structures to occur or be placed in or near a stream bed.

m. Provide any other information that may be useful in evaluating this application.

D. Discharge Information

1. For treatment/disposal systems constructed pursuant to a previously issued Ohio EPA PTI, provide the following information:

PTI Number _____
PTI Issuance Date _____
Initial Date of Discharge _____

2. Has the appropriate NPDES permit application form been submitted including representative effluent data?

_____ Yes (go to E)

_____ No (see below)

If no, submit the information as applicable under **a OR b** as follows:

a. For entities discharging process wastewater attach a completed 2C form.

b. For entities discharging wastewater of domestic origin attach the results of at least one chemical analysis of the wastestream for all pollutants for which authorization to discharge is being requested and a measurement of the daily volume (gallons per day) of wastewaters being discharged.

E. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information is, to the best of my knowledge and belief, true, accurate and complete.

This section must be signed by the same responsible person who signed the accompanying permit application or certification as per 40 CFR 122.22.

Signature _____

Date 7/03/07

h:revised.adm
June 30, 1997

2010 SEP 27 PM 12:01

AMERICAN ENERGY CORPORATION
43521 MAYHUGH HILL ROAD
BEALLSVILLE, OHIO

Antidegradation Social Economic Justification Update

Describe and provide an estimate of the important social and economic benefits to be realized through this proposed project. Include the number and types of jobs created and tax revenues Generated.

The American Energy Corporation and The Ohio Valley Coal Company are the largest underground coal mines in the State of Ohio, which, together, directly employ approximately 1,351 persons in eastern Ohio. A study conducted by Penn State University (Rose and Frias 1994) suggested that 11 ancillary jobs are associated with every mine job. A loss of these jobs would produce a devastating social and economic impact upon these employees and the communities in which they reside.

Ohio's coal industry currently produces a total of approximately 23 million tons of coal annually, of which TOVCC and American Energy produces a total of approximately 14 million tons, or approximately 60 percent of the coal produced in Ohio. The coal from these mines is sold to mostly Ohio electric utilities, and the coal is vitally needed to fuel there base-load power plants. Coal provides 86 percent of the electricity that is generated and consumed in Ohio Furthermore, not only does coal provide for State revenues from leases, royalties, rentals, coal severance, and property taxes, but also it provides for business opportunities and employment for industries that provide the goods and services to the coal mine.

Combined, TOVCC and American Energy paid a total of $55.5 million in Federal, State and local taxes and fees in 2008, of which it paid approximately $13 million in just state and local taxes and fees. Additionally, the Ohio operations of MEC spend more that $229 million annually with local vendors, suppliers, and contractors.

The American Energy Corporation tried using a filter press system at the preparation plant. The filter cake produced from the presses contained 40 to 50 percent moisture due to the presence of clays in the refuse. Clay tends to retain moisture due to its size, shape and chemical properties. Filter cake moisture must be below approximately 25 percent to provide a combined product that can be handled. Further testing confirmed that, because of the inherent physical characteristics of the slurry material generated by the MEC preparation

plants, the material cannot be sufficiently dewatered to be handled and disposed of as a solid, even when combined with coarse refuse.

Therefore, the American Energy Corporation determined that using The Ohio Valley Coal Company's No.2 impoundment was the most efficient means for slurry disposal.

American Energy Corporation will implement underground injection for slurry disposal in the future when it can be done safely. The only area where slurry could be pumped is located just east of the current main line for the mine. Sometime after 2014, mining in the southern portion of the Century Mine will be completed and at that time, the Allison workings and the Century workings will be considered for slurry injection.

PLEASE PRINT OR TYPE IN THE UNSHADED AREAS ONLY. You may report some or all of this information on separate sheets (*use the same format*) instead of completing these pages.
SEE INSTRUCTIONS.

EPA I.D. NUMBER (*copy from Item 1 of Form 1*)

V. INTAKE AND EFFLUENT CHARACTERISTICS *(continued from page 3 of Form 2-C)*

OUTFALL NO. 002

PART A –You must provide the results of at least one analysis for every pollutant in this table. Complete one table for each outfall. See instructions for additional details.

1. POLLUTANT	2. EFFLUENT						d. NO. OF ANALYSES	3. UNITS (*specify if blank*)		4. INTAKE (*optional*)		
	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)			a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
a. Biochemical Oxygen Demand (*BOD*)												
b. Chemical Oxygen Demand (*COD*)												
c. Total Organic Carbon (*TOC*)												
d. Total Suspended Solids (*TSS*)												
e. Ammonia (*as N*)												
f. Flow	VALUE 43,200		VALUE		VALUE					VALUE		
g. Temperature (*winter*)	VALUE		VALUE		VALUE			°C		VALUE		
h. Temperature (*summer*)	VALUE 26.1		VALUE		VALUE		1	°C		VALUE		
i. pH	MINIMUM 8.06	MAXIMUM 8.21	MINIMUM	MAXIMUM				STANDARD UNITS				

PART B – Mark "X" in column 2-a for each pollutant you know or have reason to believe is present. Mark "X" in column 2-b for each pollutant you believe to be absent. If you mark column 2a for any pollutant which is limited either directly, or indirectly but expressly, in an effluent limitations guideline, you must provide the results of at least one analysis for that pollutant. For other pollutants for which you mark column 2a, you must provide quantitative data or an explanation of their presence in your discharge. Complete one table for each outfall. See the instructions for additional details and requirements.

1. POLLUTANT AND CAS NO. (*if available*)	2. MARK "X"		3. EFFLUENT						d. NO. OF ANALYSES	4. UNITS		5. INTAKE (*optional*)		
	a. BELIEVED PRESENT	b. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)			a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
a. Bromide (24959-67-9)		X												
b. Chlorine, Total Residual		X												
c. Color		X												
d. Fecal Coliform		X												
e. Fluoride (16984-48-8)		X												
f. Nitrate-Nitrite (*as N*)		X												

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Southeast District

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ITEM V-B CONTINUED FROM FRONT

1. POLLUTANT AND CAS NO. (*if available*)	2. MARK "X"		3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. BELIEVED PRESENT	b. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCEN-TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
g. Nitrogen, Total Organic (*as N*)		X												
h. Oil and Grease		X												
i. Phosphorus (as P), Total (7723-14-0)	X		0.034						1	mg/L	lbs.			
j. Radioactivity														
(1) Alpha, Total		X												
(2) Beta, Total		X												
(3) Radium, Total		X												
(4) Radium 226, Total		X												
k. Sulfate (*as SO_4*) (14808-79-8)	X		1310						1	mg/L	lbs.			
l. Sulfide (*as S*)		X												
m. Sulfite (*as SO_3*) (14265-45-3)		X												
n. Surfactants		X												
o. Aluminum, Total (7429-90-5)	X		0.18						1	mg/L	lbs.			
p. Barium, Total (7440-39-3)	X		0.08						1	mg/L	lbs.			
q. Boron, Total (7440-42-8)	X		0.488						1	mg/L	lbs.			
r. Cobalt, Total (7440-48-4)		X												
s. Iron, Total (7439-89-6)	X		0.36						1	mg/L	lbs.			
t. Magnesium, Total (7439-95-4)		X												
u. Molybdenum, Total (7439-98-7)		X												
v. Manganese, Total (7439-96-5)	X		0.135						1	mg/L	lbs.			
w. Tin, Total (7440-31-5)		X												
x. Titanium, Total (7440-32-6)		X												

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CONTINUE ON PAGE V-3

EPA I.D. NUMBER (*copy from Item 1 of Form 1*)	OUTFALL NUMBER

CONTINUED FROM PAGE 3 OF FORM 2-C

PART C - If you are a primary industry and this outfall contains process wastewater, refer to Table 2c-2 in the instructions to determine which of the GC/MS fractions you must test for. Mark "X" in column 2-a for all such GC/MS fractions that apply to your industry and for ALL toxic metals, cyanides, and total phenols. If you are not required to mark column 2-a (*secondary industries, nonprocess wastewater outfalls, and nonrequired GC/MS fractions*), mark "X" in column 2-b for each pollutant you know or have reason to believe is present. Mark "X" in column 2-c for each pollutant you believe is absent. If you mark column 2a for any pollutant, you must provide the results of at least one analysis for that pollutant. If you mark column 2b for any pollutant, you must provide the results of at least one analysis for that pollutant if you know or have reason to believe it will be discharged in concentrations of 10 ppb or greater. If you mark column 2b for acrolein, acrylonitrile, 2,4 dinitrophenol, or 2-methyl-4, 6 dinitrophenol, you must provide the results of at least one analysis for each of these pollutants which you know or have reason to believe that you discharge in concentrations of 100 ppb or greater. Otherwise, for pollutants for which you mark column 2b, you must either submit at least one analysis or briefly describe the reasons the pollutant is expected to be discharged. Note that there are 7 pages to this part; please review each carefully. Complete one table (*all 7 pages*) for each outfall. See instructions for additional details and requirements.

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE (1) CONCENTRATION	a. MAXIMUM DAILY VALUE (2) MASS	b. MAXIMUM 30 DAY VALUE (*if available*) (1) CONCENTRATION	b. MAXIMUM 30 DAY VALUE (*if available*) (2) MASS	c. LONG TERM AVRG. VALUE (*if available*) (1) CONCENTRATION	c. LONG TERM AVRG. VALUE (*if available*) (2) MASS	d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	a. LONG TERM AVERAGE VALUE (2) MASS	b. NO. OF ANALYSES
METALS, CYANIDE, AND TOTAL PHENOLS															
1M. Antimony, Total (7440-36-0)			X												
2M. Arsenic, Total (7440-38-2)		X		0.0009						1	mg/L	lbs.			
3M. Beryllium, Total (7440-41-7)			X												
4M. Cadmium, Total (7440-43-9)		X		0.015						1	mg/L	lbs.			
5M. Chromium, Total (7440-47-3)		X		0.02						1	mg/L	lbs.			
6M. Copper, Total (7440-50-8)			X												
7M. Lead, Total (7439-92-1)			X												
8M. Mercury, Total (7439-97-6)		X		2.27						1	mg/L	lbs.			
9M. Nickel, Total (7440-02-0)		X		0.02						1	mg/L	lbs.			
10M. Selenium, Total (7782-49-2)		X		0.0009						1	mg/L	lbs.			
11M. Silver, Total (7440-22-4)			X												
12M. Thallium, Total (7440-28-0)			X												
13M. Zinc, Total (7440-66-6)		X		0.015						1	mg/L	lbs.			
14M. Cyanide, Total (57-12-5)			X												
15M. Phenols, Total			X												
DIOXIN															
2,3,7,8-Tetra-chlorodibenzo-P-Dioxin (1764-01-6)			X	DESCRIBE RESULTS											

AEC 02882

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1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT						d. NO. OF ANALYSES	4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)			a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – VOLATILE COMPOUNDS															
1V. Accrolein (107-02-8)			X												
2V. Acrylonitrile (107-13-1)			X												
3V. Benzene (71-43-2)			X												
4V. Bis (*Chloromethyl*) Ether (542-88-1)			X												
5V. Bromoform (75-25-2)			X												
6V. Carbon Tetrachloride (56-23-5)			X												
7V. Chlorobenzene (108-90-7)			X												
8V. Chlorodibromomethane (124-48-1)			X												
9V. Chloroethane (75-00-3)			X												
10V. 2-Chloroethylvinyl Ether (110-75-8)			X												
11V. Chloroform (67-66-3)			X												
12V. Dichlorobromomethane (75-27-4)			X												
13V. Dichlorodifluoromethane (75-71-8)			X												
14V. 1,1-Dichloroethane (75-34-3)			X												
15V. 1,2-Dichloroethane (107-06-2)			X												
16V. 1,1-Dichloroethylene (75-35-4)			X												
17V. 1,2-Dichloropropane (78-87-5)			X												
18V. 1,3-Dichloropropylene (542-75-6)			X												
19V. Ethylbenzene (100-41-4)			X												
20V. Methyl Bromide (74-83-9)			X												
21V. Methyl Chloride (74-87-3)			X												

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CONTINUED FROM PAGE V-4

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – VOLATILE COMPOUNDS (*continued*)															
22V. Methylene Chloride (75-09-2)			X												
23V. 1,1,2,2-Tetrachloroethane (79-34-5)			X												
24V. Tetrachloroethylene (127-18-4)			X												
25V. Toluene (108-88-3)			X												
26V. 1,2-Trans-Dichloroethylene (156-60-5)			X												
27V. 1,1,1-Trichloroethane (71-55-6)			X												
28V. 1,1,2-Trichloroethane (79-00-5)			X												
29V Trichloroethylene (79-01-6)			X												
30V. Trichlorofluoromethane (75-69-4)			X												
31V. Vinyl Chloride (75-01-4)			X												
GC/MS FRACTION – ACID COMPOUNDS															
1A. 2-Chlorophenol (95-57-8)			X												
2A. 2,4-Dichlorophenol (120-83-2)			X												
3A. 2,4-Dimethylphenol (105-67-9)			X												
4A. 4,6-Dinitro-O-Cresol (534-52-1)			X												
5A. 2,4-Dinitrophenol (51-28-5)			X												
6A. 2-Nitrophenol (88-75-5)			X												
7A. 4-Nitrophenol (100-02-7)			X												
8A. P-Chloro-M-Cresol (59-50-7)			X												
9A. Pentachlorophenol (87-86-5)			X												
10A. Phenol (108-95-2)			X												
11A. 2,4,6-Trichlorophenol (88-05-2)			X												

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1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – BASE/NEUTRAL COMPOUNDS															
1B. Acenaphthene (83-32-9)			X												
2B. Acenaphtylene (208-96-8)			X												
3B. Anthracene (120-12-7)			X												
4B. Benzidine (92-87-5)			X												
5B. Benzo (*a*) Anthracene (56-55-3)			X												
6B. Benzo (*a*) Pyrene (50-32-8)			X												
7B. 3,4-Benzo-fluoranthene (205-99-2)			X												
8B. Benzo (*ghi*) Perylene (191-24-2)			X												
9B. Benzo (*k*) Fluoranthene (207-08-9)			X												
10B. Bis (*2-Chloro-ethoxy*) Methane (111-91-1)			X												
11B. Bis (*2-Chloro-ethyl*) Ether (111-44-4)			X												
12B. Bis (*2-Chloroisopropyl*) Ether (102-80-1)			X												
13B. Bis (*2-Ethyl-hexyl*) Phthalate (117-81-7)			X												
14B. 4-Bromophenyl Phenyl Ether (101-55-3)			X												
15B. Butyl Benzyl Phthalate (85-68-7)			X												
16B. 2-Chloro-naphthalene (91-58-7)			X												
17B. 4-Chloro-phenyl Phenyl Ether (7005-72-3)			X												
18B. Chrysene (218-01-9)			X												
19B. Dibenzo (*a,h*) Anthracene (53-70-3)			X												
20B. 1,2-Dichloro-benzene (95-50-1)			X												
21B. 1,3-Di-chloro-benzene (541-73-1)			X												

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CONTINUED FROM PAGE V-6

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – BASE/NEUTRAL COMPOUNDS (*continued*)															
22B. 1,4-Dichlorobenzene (106-46-7)			X												
23B. 3,3-Dichlorobenzidine (91-94-1)			X												
24B. Diethyl Phthalate (84-66-2)			X												
25B. Dimethyl Phthalate (131 -11-3)			X												
26B. Di-N-Butyl Phthalate (84-74-2)			X												
27B. 2,4-Dinitrotoluene (121-14-2)			X												
28B. 2,6-Dinitrotoluene (606-20-2)			X												
29B. Di-N-Octyl Phthalate (117-84-0)			X												
30B. 1,2-Diphenylhydrazine (*as Azobenzene*) (122-66-7)			X												
31B. Fluoranthene (206-44-0)			X												
32B. Fluorene (86-73-7)			X												
33B. Hexachlorobenzene (118-74-1)			X												
34B. Hexachlorobutadiene (87-68-3)			X												
35B. Hexachlorocyclopentadiene (77-47-4)			X												
36B Hexachloroethane (67-72-1)			X												
37B. Indeno (*1,2,3-cd*) Pyrene (193-39-5)			X												
38B. Isophorone (78-59-1)			X												
39B. Naphthalene (91-20-3)			X												
40B. Nitrobenzene (98-95-3)			X												
41B. N-Nitrosodimethylamine (62-75-9)			X												
42B. N-Nitrosodi-N-Propylamine (621-64-7)			X												

CONTINUE ON REVERSE

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CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT						d. NO. OF ANALYSES	4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)			a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – BASE/NEUTRAL COMPOUNDS (*continued*)															
43B. N-Nitrosodiphenylamine (86-30-6)			X												
44B. Phenanthrene (85-01-8)			X												
45B. Pyrene (129-00-0)			X												
46B. 1,2,4-Trichlorobenzene (120-82-1)			X												
GC/MS FRACTION – PESTICIDES															
1P. Aldrin (309-00-2)															
2P. α-BHC (319-84-6)															
3P. β-BHC (319-85-7)															
4P. γ-BHC (58-89-9)															
5P. δ-BHC (319-86-8)															
6P. Chlordane (57-74-9)															
7P. 4,4'-DDT (50-29-3)															
8P. 4,4'-DDE (72-55-9)															
9P. 4,4'-DDD (72-54-8)															
10P. Dieldrin (60-57-1)															
11P. α-Enosulfan (115-29-7)															
12P. β-Endosulfan (115-29-7)															
13P. Endosulfan Sulfate (1031-07-8)															
14P. Endrin (72-20-8)															
15P. Endrin Aldehyde (7421-93-4)															
16P. Heptachlor (76-44-8)															

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EPA I.D. NUMBER (*copy from Item 1 of Form 1*)	OUTFALL NUMBER

CONTINUED FROM PAGE V-8

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCEN-TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – PESTICIDES (*continued*)															
17P. Heptachlor Epoxide (1024-57-3)															
18P. PCB-1242 (53469-21-9)															
19P. PCB-1254 (11097-69-1)															
20P. PCB-1221 (11104-28-2)															
21P. PCB-1232 (11141-16-5)															
22P. PCB-1248 (12672-29-6)															
23P. PCB-1260 (11096-82-5)															
24P. PCB-1016 (12674-11-2)															
25P. Toxaphene (8001-35-2)															

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PLEASE PRINT OR TYPE IN THE UNSHADED AREAS ONLY. You may report some or all of this information on separate sheets (*use the same format*) instead of completing these pages.
SEE INSTRUCTIONS.

EPA I.D. NUMBER (*copy from Item 1 of Form 1*)

V. INTAKE AND EFFLUENT CHARACTERISTICS *(continued from page 3 of Form 2-C)*

OUTFALL NO. 008

PART A –You must provide the results of at least one analysis for every pollutant in this table. Complete one table for each outfall. See instructions for additional details.

1. POLLUTANT	2. EFFLUENT						d. NO. OF ANALYSES	3. UNITS (*specify if blank*)		4. INTAKE (*optional*)		
	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)			a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
a. Biochemical Oxygen Demand (*BOD*)												
b. Chemical Oxygen Demand (*COD*)												
c. Total Organic Carbon (*TOC*)												
d. Total Suspended Solids (*TSS*)												
e. Ammonia (*as N*)												
f. Flow	VALUE 102,500		VALUE		VALUE					VALUE		
g. Temperature (*winter*)	VALUE		VALUE		VALUE			°C		VALUE		
h. Temperature (*summer*)	VALUE 27.5		VALUE		VALUE		1	°C		VALUE		
i. pH	MINIMUM 8.21	MAXIMUM 8.61	MINIMUM	MAXIMUM				STANDARD UNITS				

PART B – Mark "X" in column 2-a for each pollutant you know or have reason to believe is present. Mark "X" in column 2-b for each pollutant you believe to be absent. If you mark column 2a for any pollutant which is limited either directly, or indirectly but expressly, in an effluent limitations guideline, you must provide the results of at least one analysis for that pollutant. For other pollutants for which you mark column 2a, you must provide quantitative data or an explanation of their presence in your discharge. Complete one table for each outfall. See the instructions for additional details and requirements.

1. POLLUTANT AND CAS NO. (*if available*)	2. MARK "X"		3. EFFLUENT						d. NO. OF ANALYSES	4. UNITS		5. INTAKE (*optional*)		
	a. BELIEVED PRESENT	b. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)			a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
a. Bromide (24959-67-9)		X												
b. Chlorine, Total Residual		X												
c. Color		X												
d. Fecal Coliform		X												
e. Fluoride (16984-48-8)		X												
f. Nitrate-Nitrite (*as N*)		X												

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ITEM V-B CONTINUED FROM FRONT

1. POLLUTANT AND CAS NO. (*if available*)	2. MARK "X"		3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. BELIEVED PRESENT	b. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
g. Nitrogen, Total Organic (*as N*)		X												
h. Oil and Grease		X												
i. Phosphorus (as P), Total (7723-14-0)	X		0.052						1	mg/L	lbs.			
j. Radioactivity														
(1) Alpha, Total		X												
(2) Beta, Total		X												
(3) Radium, Total		X												
(4) Radium 226, Total		X												
k. Sulfate (*as SO_4*) (14808-79-8)	X		4730						1	mg/L	lbs.			
l. Sulfide (*as S*)		X												
m. Sulfite (*as SO_3*) (14265-45-3)		X												
n. Surfactants		X												
o. Aluminum, Total (7429-90-5)	X		1.35						1	mg/L	lbs.			
p. Barium, Total (7440-39-3)	X		0.05						1	mg/L	lbs.			
q. Boron, Total (7440-42-8)	X		0.720						1	mg/L	lbs.			
r. Cobalt, Total (7440-48-4)		X												
s. Iron, Total (7439-89-6)	X		0.26						1	mg/L	lbs.			
t. Magnesium, Total (7439-95-4)		X												
u. Molybdenum, Total (7439-98-7)		X												
v. Manganese, Total (7439-96-5)	X		0.38						1	mg/L	lbs.			
w. Tin, Total (7440-31-5)		X												
x. Titanium, Total (7440-32-6)		X												

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EPA I.D. NUMBER (*copy from Item 1 of Form 1*)	OUTFALL NUMBER

CONTINUED FROM PAGE 3 OF FORM 2-C

PART C - If you are a primary industry and this outfall contains process wastewater, refer to Table 2c-2 in the instructions to determine which of the GC/MS fractions you must test for. Mark "X" in column 2-a for all such GC/MS fractions that apply to your industry and for ALL toxic metals, cyanides, and total phenols. If you are not required to mark column 2-a (*secondary industries, nonprocess wastewater outfalls, and nonrequired GC/MS fractions*), mark "X" in column 2-b for each pollutant you know or have reason to believe is present. Mark "X" in column 2-c for each pollutant you believe is absent. If you mark column 2a for any pollutant, you must provide the results of at least one analysis for that pollutant. If you mark column 2b for any pollutant, you must provide the results of at least one analysis for that pollutant if you know or have reason to believe it will be discharged in concentrations of 10 ppb or greater. If you mark column 2b for acrolein, acrylonitrile, 2,4 dinitrophenol, or 2-methyl-4, 6 dinitrophenol, you must provide the results of at least one analysis for each of these pollutants which you know or have reason to believe that you discharge in concentrations of 100 ppb or greater. Otherwise, for pollutants for which you mark column 2b, you must either submit at least one analysis or briefly describe the reasons the pollutant is expected to be discharged. Note that there are 7 pages to this part; please review each carefully. Complete one table (*all 7 pages*) for each outfall. See instructions for additional details and requirements.

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
METALS, CYANIDE, AND TOTAL PHENOLS															
1M. Antimony, Total (7440-36-0)			X												
2M. Arsenic, Total (7440-38-2)		X		0.0010						1	mg/L	lbs.			
3M. Beryllium, Total (7440-41-7)			X												
4M. Cadmium, Total (7440-43-9)		X		0.6						1	mg/L	lbs.			
5M. Chromium, Total (7440-47-3)		X		0.032						1	mg/L	lbs.			
6M. Copper, Total (7440-50-8)			X												
7M. Lead, Total (7439-92-1)		X		0.016						1	mg/L	lbs.			
8M. Mercury, Total (7439-97-6)			X												
9M. Nickel, Total (7440-02-0)			X												
10M. Selenium, Total (7782-49-2)		X		0.0009						1	mg/L	lbs.			
11M. Silver, Total (7440-22-4)			X												
12M. Thallium, Total (7440-28-0)			X												
13M. Zinc, Total (7440-66-6)			X												
14M. Cyanide, Total (57-12-5)			X												
15M. Phenols, Total			X												
DIOXIN															
2,3,7,8-Tetra-chlorodibenzo-P-Dioxin (1764-01-6)			X	DESCRIBE RESULTS											

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CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – VOLATILE COMPOUNDS															
1V. Accrolein (107-02-8)			X												
2V. Acrylonitrile (107-13-1)			X												
3V. Benzene (71-43-2)			X												
4V. Bis (*Chloromethyl*) Ether (542-88-1)			X												
5V. Bromoform (75-25-2)			X												
6V. Carbon Tetrachloride (56-23-5)			X												
7V. Chlorobenzene (108-90-7)			X												
8V. Chlorodibromomethane (124-48-1)			X												
9V. Chloroethane (75-00-3)			X												
10V. 2-Chloroethylvinyl Ether (110-75-8)			X												
11V. Chloroform (67-66-3)			X												
12V. Dichlorobromomethane (75-27-4)			X												
13V. Dichlorodifluoromethane (75-71-8)			X												
14V. 1,1-Dichloroethane (75-34-3)			X												
15V. 1,2-Dichloroethane (107-06-2)			X												
16V. 1,1-Dichloroethylene (75-35-4)			X												
17V. 1,2-Dichloropropane (78-87-5)			X												
18V. 1,3-Dichloropropylene (542-75-6)			X												
19V. Ethylbenzene (100-41-4)			X												
20V. Methyl Bromide (74-83-9)			X												
21V. Methyl Chloride (74-87-3)			X												

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CONTINUED FROM PAGE V-4

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – VOLATILE COMPOUNDS (*continued*)															
22V. Methylene Chloride (75-09-2)			X												
23V. 1,1,2,2-Tetrachloroethane (79-34-5)			X												
24V. Tetrachloro-ethylene (127-18-4)			X												
25V. Toluene (108-88-3)			X												
26V. 1,2-Trans-Dichloroethylene (156-60-5)			X												
27V. 1,1,1-Trichloro-ethane (71-55-6)			X												
28V. 1,1,2-Trichloro-ethane (79-00-5)			X												
29V Trichloro-ethylene (79-01-6)			X												
30V. Trichloro-fluoromethane (75-69-4)			X												
31V. Vinyl Chloride (75-01-4)			X												
GC/MS FRACTION – ACID COMPOUNDS															
1A. 2-Chlorophenol (95-57-8)			X												
2A. 2,4-Dichloro-phenol (120-83-2)			X												
3A. 2,4-Dimethyl-phenol (105-67-9)			X												
4A. 4,6-Dinitro-O-Cresol (534-52-1)			X												
5A. 2,4-Dinitro-phenol (51-28-5)			X												
6A. 2-Nitrophenol (88-75-5)			X												
7A. 4-Nitrophenol (100-02-7)			X												
8A. P-Chloro-M-Cresol (59-50-7)			X												
9A. Pentachloro-phenol (87-86-5)			X												
10A. Phenol (108-95-2)			X												
11A. 2,4,6-Trichloro-phenol (88-05-2)			X												

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CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – BASE/NEUTRAL COMPOUNDS															
1B. Acenaphthene (83-32-9)			X												
2B. Acenaphtylene (208-96-8)			X												
3B. Anthracene (120-12-7)			X												
4B. Benzidine (92-87-5)			X												
5B. Benzo (*a*) Anthracene (56-55-3)			X												
6B. Benzo (*a*) Pyrene (50-32-8)			X												
7B. 3,4-Benzo-fluoranthene (205-99-2)			X												
8B. Benzo (*ghi*) Perylene (191-24-2)			X												
9B. Benzo (*k*) Fluoranthene (207-08-9)			X												
10B. Bis (*2-Chloro-ethoxy*) Methane (111-91-1)			X												
11B. Bis (*2-Chloro-ethyl*) Ether (111-44-4)			X												
12B. Bis (*2-Chloroisopropyl*) Ether (102-80-1)			X												
13B. Bis (*2-Ethyl-hexyl*) Phthalate (117-81-7)			X												
14B. 4 Bromophenyl Phenyl Ether (101-55-3)			X												
15B. Butyl Benzyl Phthalate (85-68-7)			X												
16B. 2-Chloro-naphthalene (91-58-7)			X												
17B. 4-Chloro-phenyl Phenyl Ether (7005-72-3)			X												
18B. Chrysene (218-01-9)			X												
19B. Dibenzo (*a,h*) Anthracene (53-70-3)			X												
20B. 1,2-Dichloro-benzene (95-50-1)			X												
21B. 1,3-Di-chloro-benzene (541-73-1)			X												

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1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCEN-TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – BASE/NEUTRAL COMPOUNDS (*continued*)															
22B. 1,4-Dichloro-benzene (106-46-7)			X												
23B. 3,3-Dichloro-benzidine (91-94-1)			X												
24B. Diethyl Phthalate (84-66-2)			X												
25B. Dimethyl Phthalate (131 -11-3)			X												
26B. Di-N-Butyl Phthalate (84-74-2)			X												
27B. 2,4-Dinitro-toluene (121-14-2)			X												
28B. 2,6-Dinitro-toluene (606-20-2)			X												
29B. Di-N-Octyl Phthalate (117-84-0)			X												
30B. 1,2-Diphenyl-hydrazine (*as Azo-benzene*) (122-66-7)			X												
31B. Fluoranthene (206-44-0)			X												
32B. Fluorene (86-73-7)			X												
33B. Hexachloro-benzene (118-74-1)			X												
34B. Hexachloro-butadiene (87-68-3)			X												
35B. Hexachloro-cyclopentadiene (77-47-4)			X												
36B Hexachloro-ethane (67-72-1)			X												
37B. Indeno (*1,2,3-cd*) Pyrene (193-39-5)			X												
38B. Isophorone (78-59-1)			X												
39B. Naphthalene (91-20-3)			X												
40B. Nitrobenzene (98-95-3)			X												
41B. N-Nitro-sodimethylamine (62-75-9)			X												
42B. N-Nitrosodi-N-Propylamine (621-64-7)			X												

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CONTINUE ON REVERSE

CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – BASE/NEUTRAL COMPOUNDS (*continued*)															
43B. N-Nitrosodiphenylamine (86-30-6)			X												
44B. Phenanthrene (85-01-8)			X												
45B. Pyrene (129-00-0)			X												
46B. 1,2,4-Trichlorobenzene (120-82-1)			X												
GC/MS FRACTION – PESTICIDES															
1P. Aldrin (309-00-2)															
2P. α-BHC (319-84-6)															
3P. β-BHC (319-85-7)															
4P. γ-BHC (58-89-9)															
5P. δ-BHC (319-86-8)															
6P. Chlordane (57-74-9)															
7P. 4,4'-DDT (50-29-3)															
8P. 4,4'-DDE (72-55-9)															
9P. 4,4'-DDD (72-54-8)															
10P. Dieldrin (60-57-1)															
11P. α-Enosulfan (115-29-7)															
12P. β-Endosulfan (115-29-7)															
13P. Endosulfan Sulfate (1031-07-8)															
14P. Endrin (72-20-8)															
15P. Endrin Aldehyde (7421-93-4)															
16P. Heptachlor (76-44-8)															

CONTINUE ON PAGE V-9

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EPA I.D. NUMBER (*copy from Item 1 of Form 1*)	OUTFALL NUMBER

CONTINUED FROM PAGE V-8

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCEN-TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – PESTICIDES (*continued*)															
17P. Heptachlor Epoxide (1024-57-3)															
18P. PCB-1242 (53469-21-9)															
19P. PCB-1254 (11097-69-1)															
20P. PCB-1221 (11104-28-2)															
21P. PCB-1232 (11141-16-5)															
22P. PCB-1248 (12672-29-6)															
23P. PCB-1260 (11096-82-5)															
24P. PCB-1016 (12674-11-2)															
25P. Toxaphene (8001-35-2)															

AEC 02897

PLEASE PRINT OR TYPE IN THE UNSHADED AREAS ONLY. You may report some or all of this information on separate sheets (*use the same format*) instead of completing these pages.
SEE INSTRUCTIONS.

EPA I.D. NUMBER (*copy from Item 1 of Form 1*)

[redacted]

OUTFALL NO. 011

V. INTAKE AND EFFLUENT CHARACTERISTICS *(continued from page 3 of Form 2-C)*

PART A –You must provide the results of at least one analysis for every pollutant in this table. Complete one table for each outfall. See instructions for additional details.

1. POLLUTANT	2. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	a. MAXIMUM DAILY VALUE (2) MASS	b. MAXIMUM 30 DAY VALUE (*if available*) (1) CONCENTRATION	b. MAXIMUM 30 DAY VALUE (*if available*) (2) MASS	c. LONG TERM AVRG. VALUE (*if available*) (1) CONCENTRATION	c. LONG TERM AVRG. VALUE (*if available*) (2) MASS	d. NO. OF ANALYSES	3. UNITS (*specify if blank*) a. CONCENTRATION	3. UNITS b. MASS	4. INTAKE (*optional*) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	4. INTAKE a. LONG TERM AVERAGE VALUE (2) MASS	4. INTAKE b. NO. OF ANALYSES
a. Biochemical Oxygen Demand (*BOD*)												
b. Chemical Oxygen Demand (*COD*)												
c. Total Organic Carbon (*TOC*)												
d. Total Suspended Solids (*TSS*)												
e. Ammonia (*as N*)												
f. Flow	VALUE 52,000		VALUE		VALUE					VALUE		
g. Temperature (*winter*)	VALUE		VALUE		VALUE			°C		VALUE		
h. Temperature (*summer*)	VALUE 26.1		VALUE		VALUE		1	°C		VALUE		
i. pH	MINIMUM 7.95	MAXIMUM 8.48	MINIMUM	MAXIMUM				STANDARD UNITS				

PART B – Mark "X" in column 2-a for each pollutant you know or have reason to believe is present. Mark "X" in column 2-b for each pollutant you believe to be absent. If you mark column 2a for any pollutant which is limited either directly, or indirectly but expressly, in an effluent limitations guideline, you must provide the results of at least one analysis for that pollutant. For other pollutants for which you mark column 2a, you must provide quantitative data or an explanation of their presence in your discharge. Complete one table for each outfall. See the instructions for additional details and requirements.

1. POLLUTANT AND CAS NO. (*if available*)	2. MARK "X" a. BELIEVED PRESENT	2. MARK "X" b. BELIEVED ABSENT	3. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	a. MAXIMUM DAILY VALUE (2) MASS	b. MAXIMUM 30 DAY VALUE (*if available*) (1) CONCENTRATION	b. MAXIMUM 30 DAY VALUE (*if available*) (2) MASS	c. LONG TERM AVRG. VALUE (*if available*) (1) CONCENTRATION	c. LONG TERM AVRG. VALUE (*if available*) (2) MASS	d. NO. OF ANALYSES	4. UNITS a. CONCENTRATION	4. UNITS b. MASS	5. INTAKE (*optional*) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	5. INTAKE a. LONG TERM AVERAGE VALUE (2) MASS	5. INTAKE b. NO. OF ANALYSES
a. Bromide (24959-67-9)		X												
b. Chlorine, Total Residual		X												
c. Color		X												
d. Fecal Coliform		X												
e. Fluoride (16984-48-8)		X												
f. Nitrate-Nitrite (*as N*)	X		.150						1	mg/L	lbs.			

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Southeast District

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ITEM V-B CONTINUED FROM FRONT

1. POLLUTANT AND CAS NO. (*if available*)	2. MARK "X"		3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. BELIEVED PRESENT	b. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
g. Nitrogen, Total Organic (*as N*)		X												
h. Oil and Grease		X												
i. Phosphorus (as P), Total (7723-14-0)	X		0.044						1	mg/L	lbs.			
j. Radioactivity														
(1) Alpha, Total		X												
(2) Beta, Total		X												
(3) Radium, Total		X												
(4) Radium 226, Total		X												
k. Sulfate (*as SO_4*) (14808-79-8)	X		83.1						1	mg/L	lbs.			
l. Sulfide (*as S*)		X												
m. Sulfite (*as SO_3*) (14265-45-3)		X												
n. Surfactants		X												
o. Aluminum, Total (7429-90-5)	X		0.39						1	mg/L	lbs.			
p. Barium, Total (7440-39-3)	X		0.09						1	mg/L	lbs.			
q. Boron, Total (7440-42-8)	X		0.620						1	mg/L	lbs.			
r. Cobalt, Total (7440-48-4)		X												
s. Iron, Total (7439-89-6)	X		0.37						1	mg/L	lbs.			
t. Magnesium, Total (7439-95-4)		X												
u. Molybdenum, Total (7439-98-7)		X												
v. Manganese, Total (7439-96-5)	X		0.50						1	mg/L	lbs.			
w. Tin, Total (7440-31-5)		X												
x. Titanium, Total (7440-32-6)		X												

AEC 02899

EPA I.D. NUMBER (*copy from Item 1 of Form 1*)	OUTFALL NUMBER

CONTINUED FROM PAGE 3 OF FORM 2-C

PART C - If you are a primary industry and this outfall contains process wastewater, refer to Table 2c-2 in the instructions to determine which of the GC/MS fractions you must test for. Mark "X" in column 2-a for all such GC/MS fractions that apply to your industry and for ALL toxic metals, cyanides, and total phenols. If you are not required to mark column 2-a (*secondary industries, nonprocess wastewater outfalls, and nonrequired GC/MS fractions*), mark "X" in column 2-b for each pollutant you know or have reason to believe is present. Mark "X" in column 2-c for each pollutant you believe is absent. If you mark column 2a for any pollutant, you must provide the results of at least one analysis for that pollutant. If you mark column 2b for any pollutant, you must provide the results of at least one analysis for that pollutant if you know or have reason to believe it will be discharged in concentrations of 10 ppb or greater. If you mark column 2b for acrolein, acrylonitrile, 2,4 dinitrophenol, or 2-methyl-4, 6 dinitrophenol, you must provide the results of at least one analysis for each of these pollutants which you know or have reason to believe that you discharge in concentrations of 100 ppb or greater. Otherwise, for pollutants for which you mark column 2b, you must either submit at least one analysis or briefly describe the reasons the pollutant is expected to be discharged. Note that there are 7 pages to this part; please review each carefully. Complete one table (*all 7 pages*) for each outfall. See instructions for additional details and requirements.

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
METALS, CYANIDE, AND TOTAL PHENOLS															
1M. Antimony, Total (7440-36-0)			X												
2M. Arsenic, Total (7440-38-2)		X		0.0016						1	mg/L	lbs.			
3M. Beryllium, Total (7440-41-7)			X												
4M. Cadmium, Total (7440-43-9)		X		0.04						1	mg/L	lbs.			
5M. Chromium, Total (7440-47-3)		X		0.018						1	mg/L	lbs.			
6M. Copper, Total (7440-50-8)			X												
7M. Lead, Total (7439-92-1)			X												
8M. Mercury, Total (7439-97-6)		X		2.39						1	mg/L	lbs.			
9M. Nickel, Total (7440-02-0)			X												
10M. Selenium, Total (7782-49-2)		X		0.0007						1	mg/L	lbs.			
11M. Silver, Total (7440-22-4)			X												
12M. Thallium, Total (7440-28-0)			X												
13M. Zinc, Total (7440-66-6)		X		0.002						1	mg/L	lbs.			
14M. Cyanide, Total (57-12-5)			X												
15M. Phenols, Total			X												
DIOXIN															
2,3,7,8-Tetra-chlorodibenzo-P-Dioxin (1764-01-6)			X	DESCRIBE RESULTS											

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CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – VOLATILE COMPOUNDS															
1V. Accrolein (107-02-8)			X												
2V. Acrylonitrile (107-13-1)			X												
3V. Benzene (71-43-2)			X												
4V. Bis (*Chloromethyl*) Ether (542-88-1)			X												
5V. Bromoform (75-25-2)			X												
6V. Carbon Tetrachloride (56-23-5)			X												
7V. Chlorobenzene (108-90-7)			X												
8V. Chlorodibromomethane (124-48-1)			X												
9V. Chloroethane (75-00-3)			X												
10V. 2-Chloroethylvinyl Ether (110-75-8)			X												
11V. Chloroform (67-66-3)			X												
12V. Dichlorobromomethane (75-27-4)			X												
13V. Dichlorodifluoromethane (75-71-8)			X												
14V. 1,1-Dichloroethane (75-34-3)			X												
15V. 1,2-Dichloroethane (107-06-2)			X												
16V. 1,1-Dichloroethylene (75-35-4)			X												
17V. 1,2-Dichloropropane (78-87-5)			X												
18V. 1,3-Dichloropropylene (542-75-6)			X												
19V. Ethylbenzene (100-41-4)			X												
20V. Methyl Bromide (74-83-9)			X												
21V. Methyl Chloride (74-87-3)			X												

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CONTINUED FROM PAGE V-4

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – VOLATILE COMPOUNDS (*continued*)															
22V. Methylene Chloride (75-09-2)			X												
23V. 1,1,2,2-Tetrachloroethane (79-34-5)			X												
24V. Tetrachloro-ethylene (127-18-4)			X												
25V. Toluene (108-88-3)			X												
26V. 1,2-Trans-Dichloroethylene (156-60-5)			X												
27V. 1,1,1-Trichloro-ethane (71-55-6)			X												
28V. 1,1,2-Trichloro-ethane (79-00-5)			X												
29V Trichloro-ethylene (79-01-6)			X												
30V. Trichloro-fluoromethane (75-69-4)			X												
31V. Vinyl Chloride (75-01-4)			X												
GC/MS FRACTION – ACID COMPOUNDS															
1A. 2-Chlorophenol (95-57-8)			X												
2A. 2,4-Dichloro-phenol (120-83-2)			X												
3A. 2,4-Dimethyl-phenol (105-67-9)			X												
4A. 4,6-Dinitro-O-Cresol (534-52-1)			X												
5A. 2,4-Dinitro-phenol (51-28-5)			X												
6A. 2-Nitrophenol (88-75-5)			X												
7A. 4-Nitrophenol (100-02-7)			X												
8A. P-Chloro-M-Cresol (59-50-7)			X												
9A. Pentachloro-phenol (87-86-5)			X												
10A. Phenol (108-95-2)			X												
11A. 2,4,6-Trichloro-phenol (88-05-2)			X												

CONTINUE ON REVERSE

AEC 02902

CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – BASE/NEUTRAL COMPOUNDS															
1B. Acenaphthene (83-32-9)			X												
2B. Acenaphtylene (208-96-8)			X												
3B. Anthracene (120-12-7)			X												
4B. Benzidine (92-87-5)			X												
5B. Benzo (*a*) Anthracene (56-55-3)			X												
6B. Benzo (*a*) Pyrene (50-32-8)			X												
7B. 3,4-Benzo-fluoranthene (205-99-2)			X												
8B. Benzo (*ghi*) Perylene (191-24-2)			X												
9B. Benzo (*k*) Fluoranthene (207-08-9)			X												
10B. Bis (*2-Chloro-ethoxy*) Methane (111-91-1)			X												
11B. Bis (*2-Chloro-ethyl*) Ether (111-44-4)			X												
12B. Bis (*2-Chloroisopropyl*) Ether (102-80-1)			X												
13B. Bis (*2-Ethyl hexyl*) Phthalate (117-81-7)			X												
14B. 4 Bromophenyl Phenyl Ether (101-55-3)			X												
15B. Butyl Benzyl Phthalate (85-68-7)			X												
16B. 2-Chloro-naphthalene (91-58-7)			X												
17B. 4-Chloro-phenyl Phenyl Ether (7005-72-3)			X												
18B. Chrysene (218-01-9)			X												
19B. Dibenzo (*a,h*) Anthracene (53-70-3)			X												
20B. 1,2-Dichloro-benzene (95-50-1)			X												
21B. 1,3-Di-chloro-benzene (541-73-1)			X												

AEC 02903

CONTINUED FROM PAGE V-6

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCEN-TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – BASE/NEUTRAL COMPOUNDS (*continued*)															
22B. 1,4-Dichloro-benzene (106-46-7)			X												
23B. 3,3-Dichloro-benzidine (91-94-1)			X												
24B. Diethyl Phthalate (84-66-2)			X												
25B. Dimethyl Phthalate (131 -11-3)			X												
26B. Di-N-Butyl Phthalate (84-74-2)			X												
27B. 2,4-Dinitro-toluene (121-14-2)			X												
28B. 2,6-Dinitro-toluene (606-20-2)			X												
29B Di-N-Octyl Phthalate (117-84-0)			X												
30B. 1,2-Diphenyl-hydrazine (*as Azo-benzene*) (122-66-7)			X												
31B. Fluoranthene (206-44-0)			X												
32B. Fluorene (86-73-7)			X												
33B. Hexachloro-benzene (118-74-1)			X												
34B. Hexachloro-butadiene (87-68-3)			X												
35B. Hexachloro-cyclopentadiene (77-47-4)			X												
36B Hexachloro-ethane (67-72-1)			X												
37B. Indeno (*1,2,3-cd*) Pyrene (193-39-5)			X												
38B. Isophorone (78-59-1)			X												
39B. Naphthalene (91-20-3)			X												
40B. Nitrobenzene (98-95-3)			X												
41B. N-Nitro-sodimethylamine (62-75-9)			X												
42B. N-Nitrosodi-N-Propylamine (621-64-7)			X												

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1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – BASE/NEUTRAL COMPOUNDS (*continued*)															
43B. N-Nitrosodiphenylamine (86-30-6)			X												
44B. Phenanthrene (85-01-8)			X												
45B. Pyrene (129-00-0)			X												
46B. 1,2,4-Trichlorobenzene (120-82-1)			X												
GC/MS FRACTION – PESTICIDES															
1P. Aldrin (309-00-2)															
2P. α-BHC (319-84-6)															
3P. β-BHC (319-85-7)															
4P. γ-BHC (58-89-9)															
5P. δ-BHC (319-86-8)															
6P. Chlordane (57-74-9)															
7P. 4,4'-DDT (50-29-3)															
8P. 4,4'-DDE (72-55-9)															
9P. 4,4'-DDD (72-54-8)															
10P. Dieldrin (60-57-1)															
11P. α-Enosulfan (115-29-7)															
12P. β-Endosulfan (115-29-7)															
13P. Endosulfan Sulfate (1031-07-8)															
14P. Endrin (72-20-8)															
15P. Endrin Aldehyde (7421-93-4)															
16P. Heptachlor (76-44-8)															

AEC 02905

EPA I.D. NUMBER (*copy from Item 1 of Form 1*)	OUTFALL NUMBER

CONTINUED FROM PAGE V-8

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT						d. NO. OF ANALYSES	4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)			a. CONCEN-TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – PESTICIDES (*continued*)															
17P. Heptachlor Epoxide (1024-57-3)															
18P. PCB-1242 (53469-21-9)															
19P. PCB-1254 (11097-69-1)															
20P. PCB-1221 (11104-28-2)															
21P. PCB-1232 (11141-16-5)															
22P. PCB-1248 (12672-29-6)															
23P. PCB-1260 (11096-82-5)															
24P. PCB-1016 (12674-11-2)															
25P. Toxaphene (8001-35-2)															

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PLEASE PRINT OR TYPE IN THE UNSHADED AREAS ONLY. You may report some or all of this information on separate sheets (*use the same format*) instead of completing these pages.
SEE INSTRUCTIONS.

EPA I.D. NUMBER (*copy from Item 1 of Form 1*)

V. INTAKE AND EFFLUENT CHARACTERISTICS *(continued from page 3 of Form 2-C)*

[redacted]

OUTFALL NO. 015

PART A –You must provide the results of at least one analysis for every pollutant in this table. Complete one table for each outfall. See instructions for additional details.

1. POLLUTANT	2. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	a. MAXIMUM DAILY VALUE (2) MASS	b. MAXIMUM 30 DAY VALUE (*if available*) (1) CONCENTRATION	b. MAXIMUM 30 DAY VALUE (*if available*) (2) MASS	c. LONG TERM AVRG. VALUE (*if available*) (1) CONCENTRATION	c. LONG TERM AVRG. VALUE (*if available*) (2) MASS	d. NO. OF ANALYSES	3. UNITS (*specify if blank*) a. CONCENTRATION	3. UNITS b. MASS	4. INTAKE (*optional*) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	a. LONG TERM AVERAGE VALUE (2) MASS	4. INTAKE b. NO. OF ANALYSES
a. Biochemical Oxygen Demand (*BOD*)												
b. Chemical Oxygen Demand (*COD*)												
c. Total Organic Carbon (*TOC*)												
d. Total Suspended Solids (*TSS*)												
e. Ammonia (*as N*)												
f. Flow	VALUE 10,500		VALUE		VALUE					VALUE		
g. Temperature (*winter*)	VALUE		VALUE		VALUE			°C		VALUE		
h. Temperature (*summer*)	VALUE 26.9		VALUE		VALUE		1	°C		VALUE		
i. pH	MINIMUM 7.91	MAXIMUM 8.47	MINIMUM	MAXIMUM				STANDARD UNITS				

PART B – Mark "X" in column 2-a for each pollutant you know or have reason to believe is present. Mark "X" in column 2-b for each pollutant you believe to be absent. If you mark column 2a for any pollutant which is limited either directly, or indirectly but expressly, in an effluent limitations guideline, you must provide the results of at least one analysis for that pollutant. For other pollutants for which you mark column 2a, you must provide quantitative data or an explanation of their presence in your discharge. Complete one table for each outfall. See the instructions for additional details and requirements.

1. POLLUTANT AND CAS NO. (*if available*)	2. MARK "X" a. BELIEVED PRESENT	2. MARK "X" b. BELIEVED ABSENT	3. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	a. MAXIMUM DAILY VALUE (2) MASS	b. MAXIMUM 30 DAY VALUE (*if available*) (1) CONCENTRATION	b. MAXIMUM 30 DAY VALUE (*if available*) (2) MASS	c. LONG TERM AVRG. VALUE (*if available*) (1) CONCENTRATION	c. LONG TERM AVRG. VALUE (*if available*) (2) MASS	d. NO. OF ANALYSES	4. UNITS a. CONCENTRATION	4. UNITS b. MASS	5. INTAKE (*optional*) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	a. LONG TERM AVERAGE VALUE (2) MASS	5. INTAKE b. NO. OF ANALYSES
a. Bromide (24959-67-9)		X												
b. Chlorine, Total Residual		X												
c. Color		X												
d. Fecal Coliform		X												
e. Fluoride (16984-48-8)		X												
f. Nitrate-Nitrite (*as N*)		X												

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ITEM V-B CONTINUED FROM FRONT

1. POLLUTANT AND CAS NO. (*if available*)	2. MARK "X"		3. EFFLUENT						d. NO. OF ANALYSES	4. UNITS		5. INTAKE (*optional*)		
	a. BELIEVED PRESENT	b. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)			a. CONCEN-TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
g. Nitrogen, Total Organic (*as N*)		X												
h. Oil and Grease		X												
i. Phosphorus (as P), Total (7723-14-0)	X		0.028						1	mg/L	lbs.			
j. Radioactivity														
(1) Alpha, Total		X												
(2) Beta, Total		X												
(3) Radium, Total		X												
(4) Radium 226, Total		X												
k. Sulfate (*as SO_4*) (14808-79-8)	X		5490						1	mg/L	lbs.			
l. Sulfide (*as S*)		X												
m. Sulfite (*as SO_4*) (14265-45-3)		X												
n. Surfactants		X												
o. Aluminum, Total (7429-90-5)	X		0.41						1	mg/L	lbs.			
p. Barium, Total (7440-39-3)	X		0.07						1	mg/L	lbs.			
q. Boron, Total (7440-42-8)	X		0.523						1	mg/L	lbs.			
r. Cobalt, Total (7440-48-4)		X												
s. Iron, Total (7439-89-6)	X		1.52						1	mg/L	lbs.			
t. Magnesium, Total (7439-95-4)		X												
u. Molybdenum, Total (7439-98-7)		X												
v. Manganese, Total (7439-96-5)	X		2.35						1	mg/L	lbs.			
w. Tin, Total (7440-31-5)		X												
x. Titanium, Total (7440-32-6)		X												

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CONTINUE ON PAGE V-3

EPA I.D. NUMBER (*copy from Item 1 of Form 1*)	OUTFALL NUMBER

CONTINUED FROM PAGE 3 OF FORM 2-C

PART C - If you are a primary industry and this outfall contains process wastewater, refer to Table 2c-2 in the instructions to determine which of the GC/MS fractions you must test for. Mark "X" in column 2-a for all such GC/MS fractions that apply to your industry and for ALL toxic metals, cyanides, and total phenols. If you are not required to mark column 2-a (*secondary industries, nonprocess wastewater outfalls, and nonrequired GC/MS fractions*), mark "X" in column 2-b for each pollutant you know or have reason to believe is present. Mark "X" in column 2-c for each pollutant you believe is absent. If you mark column 2a for any pollutant, you must provide the results of at least one analysis for that pollutant. If you mark column 2b for any pollutant, you must provide the results of at least one analysis for that pollutant if you know or have reason to believe it will be discharged in concentrations of 10 ppb or greater. If you mark column 2b for acrolein, acrylonitrile, 2,4 dinitrophenol, or 2-methyl-4, 6 dinitrophenol, you must provide the results of at least one analysis for each of these pollutants which you know or have reason to believe that you discharge in concentrations of 100 ppb or greater. Otherwise, for pollutants for which you mark column 2b, you must either submit at least one analysis or briefly describe the reasons the pollutant is expected to be discharged. Note that there are 7 pages to this part; please review each carefully. Complete one table (*all 7 pages*) for each outfall. See instructions for additional details and requirements.

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
METALS, CYANIDE, AND TOTAL PHENOLS															
1M. Antimony, Total (7440-36-0)			X												
2M. Arsenic, Total (7440-38-2)		X		0.0008						1	mg/L	lbs.			
3M. Beryllium, Total (7440-41-7)			X												
4M. Cadmium, Total (7440-43-9)		X		0.07						1	mg/L	lbs.			
5M. Chromium, Total (7440-47-3)		X		0.037						1	mg/L	lbs.			
6M. Copper, Total (7440-50-8)		X		0.005						1	mg/L	lbs.			
7M. Lead, Total (7439-92-1)			X												
8M. Mercury, Total (7439-97-6)		X		1.88						1	mg/L	lbs.			
9M. Nickel, Total (7440-02-0)		X		0.04						1	mg/L	lbs.			
10M. Selenium, Total (7782-49-2)		X		0.0008						1	mg/L	lbs.			
11M. Silver, Total (7440-22-4)			X												
12M. Thallium, Total (7440-28-0)			X												
13M. Zinc, Total (7440-66-6)		X		0.010						1	mg/L	lbs.			
14M. Cyanide, Total (57-12-5)			X												
15M. Phenols, Total			X												
DIOXIN															
2,3,7,8-Tetra-chlorodibenzo-P-Dioxin (1764-01-6)			X	DESCRIBE RESULTS											

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CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – VOLATILE COMPOUNDS															
1V. Accrolein (107-02-8)			X												
2V. Acrylonitrile (107-13-1)			X												
3V. Benzene (71-43-2)			X												
4V. Bis (*Chloromethyl*) Ether (542-88-1)			X												
5V. Bromoform (75-25-2)			X												
6V. Carbon Tetrachloride (56-23-5)			X												
7V. Chlorobenzene (108-90-7)			X												
8V. Chlorodibromomethane (124-48-1)			X												
9V. Chloroethane (75-00-3)			X												
10V. 2-Chloroethylvinyl Ether (110-75-8)			X												
11V. Chloroform (67-66-3)			X												
12V. Dichlorobromomethane (75-27-4)			X												
13V. Dichlorodifluoromethane (75-71-8)			X												
14V. 1,1-Dichloroethane (75-34-3)			X												
15V. 1,2-Dichloroethane (107-06-2)			X												
16V. 1,1-Dichloroethylene (75-35-4)			X												
17V. 1,2-Dichloropropane (78-87-5)			X												
18V. 1,3-Dichloropropylene (542-75-6)			X												
19V. Ethylbenzene (100-41-4)			X												
20V. Methyl Bromide (74-83-9)			X												
21V. Methyl Chloride (74-87-3)			X												

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CONTINUED FROM PAGE V-4

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – VOLATILE COMPOUNDS (*continued*)															
22V. Methylene Chloride (75-09-2)			X												
23V. 1,1,2,2-Tetrachloroethane (79-34-5)			X												
24V. Tetrachloroethylene (127-18-4)			X												
25V. Toluene (108-88-3)			X												
26V. 1,2-Trans-Dichloroethylene (156-60-5)			X												
27V. 1,1,1-Trichloroethane (71-55-6)			X												
28V. 1,1,2-Trichloroethane (79-00-5)			X												
29V Trichloroethylene (79-01-6)			X												
30V. Trichlorofluoromethane (75-69-4)			X												
31V. Vinyl Chloride (75-01-4)			X												
GC/MS FRACTION – ACID COMPOUNDS															
1A. 2-Chlorophenol (95-57-8)			X												
2A. 2,4-Dichlorophenol (120-83-2)			X												
3A. 2,4-Dimethylphenol (105-67-9)			X												
4A. 4,6-Dinitro-O-Cresol (534-52-1)			X												
5A. 2,4-Dinitrophenol (51-28-5)			X												
6A. 2-Nitrophenol (88-75-5)			X												
7A. 4-Nitrophenol (100-02-7)			X												
8A. P-Chloro-M-Cresol (59-50-7)			X												
9A. Pentachlorophenol (87-86-5)			X												
10A. Phenol (108-95-2)			X												
11A. 2,4,6-Trichlorophenol (88-05-2)			X												

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CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCEN-TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – BASE/NEUTRAL COMPOUNDS															
1B. Acenaphthene (83-32-9)			X												
2B. Acenaphtylene (208-96-8)			X												
3B. Anthracene (120-12-7)			X												
4B. Benzidine (92-87-5)			X												
5B. Benzo (*a*) Anthracene (56-55-3)			X												
6B. Benzo (*a*) Pyrene (50-32-8)			X												
7B. 3,4-Benzo-fluoranthene (205-99-2)			X												
8B. Benzo (*ghi*) Perylene (191-24-2)			X												
9B. Benzo (*k*) Fluoranthene (207-08-9)			X												
10B. Bis (*2-Chloro-ethoxy*) Methane (111-91-1)			X												
11B. Bis (*2-Chloro-ethyl*) Ether (111-44-4)			X												
12B. Bis (*2-Chloroisopropyl*) Ether (102-80-1)			X												
13B. Bis (*2-Ethyl-hexyl*) Phthalate (117-81-7)			X												
14B. 4-Bromophenyl Phenyl Ether (101-55-3)			X												
15B. Butyl Benzyl Phthalate (85-68-7)			X												
16B. 2-Chloro-naphthalene (91-58-7)			X												
17B. 4-Chloro-phenyl Phenyl Ether (7005-72-3)			X												
18B. Chrysene (218-01-9)			X												
19B. Dibenzo (*a,h*) Anthracene (53-70-3)			X												
20B. 1,2-Dichloro-benzene (95-50-1)			X												
21B. 1,3-Di-chloro-benzene (541-73-1)			X												

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CONTINUED FROM PAGE V-6

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – BASE/NEUTRAL COMPOUNDS (*continued*)															
22B. 1,4-Dichlorobenzene (106-46-7)			X												
23B. 3,3-Dichlorobenzidine (91-94-1)			X												
24B. Diethyl Phthalate (84-66-2)			X												
25B. Dimethyl Phthalate (131 -11-3)			X												
26B. Di-N-Butyl Phthalate (84-74-2)			X												
27B. 2,4-Dinitrotoluene (121-14-2)			X												
28B. 2,6-Dinitrotoluene (606-20-2)			X												
29B. Di-N-Octyl Phthalate (117-84-0)			X												
30B. 1,2-Diphenylhydrazine (*as Azobenzene*) (122-66-7)			X												
31B. Fluoranthene (206-44-0)			X												
32B. Fluorene (86-73-7)			X												
33B. Hexachlorobenzene (118-74-1)			X												
34B. Hexachlorobutadiene (87-68-3)			X												
35B. Hexachlorocyclopentadiene (77-47-4)			X												
36B Hexachloroethane (67-72-1)			X												
37B. Indeno (*1,2,3-cd*) Pyrene (193-39-5)			X												
38B. Isophorone (78-59-1)			X												
39B. Naphthalene (91-20-3)			X												
40B. Nitrobenzene (98-95-3)			X												
41B. N-Nitrosodimethylamine (62-75-9)			X												
42B. N-Nitrosodi-N-Propylamine (621-64-7)			X												

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1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – BASE/NEUTRAL COMPOUNDS (*continued*)															
43B. N-Nitrosodiphenylamine (86-30-6)			X												
44B. Phenanthrene (85-01-8)			X												
45B. Pyrene (129-00-0)			X												
46B. 1,2,4-Trichlorobenzene (120-82-1)			X												
GC/MS FRACTION – PESTICIDES															
1P. Aldrin (309-00-2)															
2P. α-BHC (319-84-6)															
3P. β-BHC (319-85-7)															
4P. γ-BHC (58-89-9)															
5P. δ-BHC (319-86-8)															
6P. Chlordane (57-74-9)															
7P. 4,4'-DDT (50-29-3)															
8P. 4,4'-DDE (72-55-9)															
9P. 4,4'-DDD (72-54-8)															
10P. Dieldrin (60-57-1)															
11P. α-Enosulfan (115-29-7)															
12P. β-Endosulfan (115-29-7)															
13P. Endosulfan Sulfate (1031-07-8)															
14P. Endrin (72-20-8)															
15P. Endrin Aldehyde (7421-93-4)															
16P. Heptachlor (76-44-8)															

AEC 02914

EPA I.D. NUMBER (*copy from Item 1 of Form 1*)	OUTFALL NUMBER

CONTINUED FROM PAGE V-8

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – PESTICIDES (*continued*)															
17P. Heptachlor Epoxide (1024-57-3)															
18P. PCB-1242 (53469-21-9)															
19P. PCB-1254 (11097-69-1)															
20P. PCB-1221 (11104-28-2)															
21P. PCB-1232 (11141-16-5)															
22P. PCB-1248 (12672-29-6)															
23P. PCB-1260 (11096-82-5)															
24P. PCB-1016 (12674-11-2)															
25P. Toxaphene (8001-35-2)															

AEC 02915

ATTACHMENT #1
TO OHIO ENVIRONMENTAL PROTECTION AGENCY
ANTI DEGRADATION ADDENDUM
CENTURY MINING COMPANY SEWAGE TREATMENT FACILITY
BELMONT COUNTY, OHIO

MINIMAL DEGRADATION ALTERNATIVE:

INTRODUCTION:

This commentary is identical to that in the INTRODUCTION on PAGE 1 of this document.

ANSWERS TO SPECIFIC QUESTIONS ON THE APPLICATION:

4.a) DESCRIBE THE AVAILABILITY, COST EFFECTIVENESS AND TECHNICAL FEASIBILITY OF CONNECTING TO EXISTING CENTRAL OR REGIONAL SEWAGE COLLECTION AND TREATMENT FACILITIES, INCLUDING LONG RANGE PLANS FOR SEWER SERVICE OUTLINED IN STATE OR LOCAL WATER QUALITY MANAGEMENT PLANNING DOCUMENTS AND APPLICABLE FACILITY PLANNING DOCUMENTS.

The commentary here is the same as that under Section 4.a) in the Preferred Design Alternative.

4.b) LIST AND DESCRIBE ALL GOVERNMENT AND/OR PRIVATELY SPONSORED CONSERVATION PROJECTS THAT MAY HAVE BEEN OR WILL BE SPECIFICALLY TARGETED TO IMPROVE WATER QUALITY OR ENHANCE RECREATIONAL OPPORTUNITIES IN THE AFFECTED WATER RESOURCE.

The commentary here is the same as that under Section 4.b) in the Preferred Design Alternative.

4.c) PROVIDE A BRIEF DESCRIPTION OF THE MINIMAL DEGRADATION TREATMENT/DISPOSAL ALTERNATIVE INCLUDING OPERATIONAL AND MAINTENANCE NEEDS.

This alternative would treat sewage effluent in the package treatment plant previously described and discharge treated water to the process water supply pond. This pond has a capacity of 1,500,000 gallon. Although the combined water source would be used to supply dust control water for the underground mining machine, the 10,000 gallon per day of treated

sewage effluent would have little impact on the water source. The dilution factor is significant and the intake for the miner would be located at the opposite end of the pond from the sewage outlet.

4.d) OUTLINE OF THE TREATMENT/DISPOSAL SYSTEM EVALUATED, INCLUDING THE COSTS ASSOCIATED WITH THE EQUIPMENT, INSTALLATION AND CONTINUED OPERATION AND MAINTENANCE

The treatment system is identical with that described in the Preferred Design Alternative except that the sewage effluent would be discharged to the process water pond instead of to Piney Creek. The disposal system is described in Section 4.c) of this Design Alternative.

4.e) IDENTIFY THE SUBSTANCES TO BE DISCHARGED, INCLUDING THE AMOUNT OF REGULATED POLLUTANTS TO BE DISCHARGED IN TERMS OF MASS AND CONCENTRATION

The response to this question is the same as for Item #4.e) in the other design alternatives.

4.f) DESCRIBE THE RELIABILITY OF THE TREATMENT/DISPOSAL SYSTEM, INCLUDING BUT NOT LIMITED TO THE POSSIBILITY OF RECURRING OPERATION AND MAINTENANCE DIFFICULTIES THAT WOULD LEAD TO INCREASED DEGRADATION.

The answer to this question is the same as that for Item # 4.f) in the Preferred Design Alternative.

4.g) DESCRIBE ANY IMPACTS TO HUMAN HEALTH AND THE OVERALL QUALITY AND VALUE OF THE WATER RESOURCE.

The commentary here is the same as that for the Preferred Design Alternative except that the underground mine employees might be exposed to very small amounts of bacteria because of the sewage effluent being used to service the underground dust control system on the mine machinery.

Some of the treated effluent could also be transported out of the mine on the coal. The resource will be removed to the shipping site on conveyor belts. This could further expose mine employees to the liquid.

4.h) DESCRIBE AND PROVIDE AN ESTIMATE OF THE IMPORTANT SOCIAL AND ECONOMIC BENEFITS TO BE REALIZED THROUGH THIS PROPOSED PROJECT. INCLUDE THE NUMBER AND TYPES OF JOBS CREATED AND THE TAX REVENUES GENERATED.

The commentary here is identical to that under Item # 4.h) on Page 4 of this document.

AEC 02917

4.i) DESCRIBE ENVIRONMENTAL BENEFITS TO BE REALIZED THROUGH THIS PROPOSED PROJECT.

The commentary here is identical to that under Item #4.i) on Page 5 of this document.

4.j) DESCRIBE AND PROVIDE AN ESTIMATE OF THE SOCIAL AND ECONOMIC BENEFITS THAT MAY BE LOST AS A RESULT OF THIS PROJECT. INCLUDE THE IMPACTS ON COMMERCIAL AND RECREATIONAL USE OF THE WATER RESOURCE.

There would be no loss of social or economic benefit if this alternative were adopted. There would be no impacts to streams or other water bodies other than to the process water pond. All sewage effluent will be routed through the pond to the dust control system on the underground mining machinery.

4.k) DESCRIBE THE ENVIRONMENTAL BENEFITS LOST AS A RESULT OF THIS PROJECT. INCLUDE THE IMPACT ON AQUATIC LIFE, WILDLIFE THREATENED OR ENDANGERED SPECIES.

There would be no impacts on aquatic life or wildlife. No discharge to waters of the state would occur. Comments on threatened and endangered species were set forth in earlier sections of this document.

4.l) A DESCRIPTION OF ANY CONSTRUCTION WORK, FILL OR OTHER STRUCTURES TO OCCUR OR BE PLACED IN OR NEAR A STREAM BED.

There would be no construction work, fill or other structures placed in streams under this alternative.

4.m) PROVIDE ANY OTHER INFORMATION THAT MAY BE USEFUL IN EVALUATING THIS APPLICATION.

AEC 02918

ATTACHMENT #1

MITIGATION PLAN

MITIGATION PLAN
CENTURY MINE SEWAGE TREATMENT FACILITY
AMERICAN ENERGY CORPORATION
BELMONT COUNTY, OHIO

INTRODUCTION:

The preferred design alternative will result in minor degradation of the receiving stream, Piney Creek. The degradation will result from the discharge of 10,000 gallons per day (GPD) of treated sanitary sewer effluent into Piney Creek. This stream has an average flow rate of 7 million gallons per day (MGPD) according to our hydrology records. This average flow rate was based upon averages of regular, periodic high and low flow observations over a period of four years.

BACKGROUND:

Treated sewage effluent from the plant will be 10,000 GPD. This flow will be divided into three segments because of the shift schedule in the mine. The peak flow will be approximately 4,400 gallon following the afternoon shift. Dividing this flow by 1/3 the average daily flow in Piney Creek yields a dilution ratio of:

$$4.4 \times 10^{3} / 2.33 \times 10^{6} = 1.89 \times 10^{-3} \text{ or } 0.0018:1.$$

Based upon the flows during the other shifts, the dilution ratio at this rate of flow will be:

$$2.8 \times 10^{3} / 2.33 \times 10^{6} = 1.20 \times 10^{-3} \text{ or } 0.0012:1.$$

6,910 feet of stream and 1.8 acres of wetland will be disturbed by mining surface activities. Mitigative reconstruction for these disturbances will be performed. This mitigation has been described, submitted and permitted separately. The stream mitigation will consist of the development of a flood plain along Piney Creek and Long Run. The wetland mitigation will be undertaken in the old fresh water pond in Long Run.

There are 8,300 feet of stream on the site which will not be disturbed by mining activities. This length of stream includes segments of Piney Creek and Long Run. 6,910 feet of this available stream will be used for mitigation of other stream disturbances and 1,035 feet will be used for mitigation of wetlands disturbances.

STREAM MITIGATION:

It is proposed to add 100 feet of stream development along Long Run and Piney Creek to mitigate for this discharge. Both of these streams are deeply incised along certain reaches and contain naturally formed flood plains in others. Mitigation will consist of developing a flood plain along the streams where none exists now, if physically possible, and enhancing existing flood plains by planting vegetation acclimated to the environment. Riparian and berm vegetation will be established in the newly developed flood plain and the adjacent area.

Flood plain geometry will be developed based upon the 11/2 year - 6 hour storm event. Typical stream cross-sections showing flood plain development are included as Sheet -M-4-.

STREAM RIPARIAN ZONES AND BERMS:

NOTE: A plant specialist should be consulted to assure establishment of stream vegetation. The establishment of these areas is critical to the acceptability of the mitigation effort by the regulatory agencies.

A riparian zone will be established between the edge of the water and the top of the bank. A berm will be established from the top of the bank for a distance of 2 ½ times the bottom width of the stream or 50 feet except in areas where this would interfere with mining operations. In this case, the flood plain only would be enhanced. These areas will be planted with a mixture of trees and shrubs selected from the table below. Trees and shrubs will be interspersed on an 8 foot by 8 foot grid (each tree will occupy 64 square feet). Plant zones shown in the table are defined as follows:

Plant Zone #1: Is below the level of the normal waterline to the upper limit of the saturated area kept moist by capillary water movement. This zone includes the greatest potential for periodic inundation and the least moisture stress.

Plant Zone #2: is from the upper limit of zone #1 to 2-3 feet from the top of the bank. This area may be subject to rapid drying and greater moisture stress.

Plant Zone #3: is an area from 2-3 feet below the top of the bank to a minimum of 30 feet into the flood plain.

PLANT ZONE	COMMON NAME	SPECIES	NOTE
1	White willow	Salix alba	a
1	Black willow	Salix nigra	a
1	Sandbar willow	Salix interior	a
1	Carolina willow	Salix caroliniana	a
1	Peach leaved willow	Salix amygadaloides	a
1,2,3	Flowering dogwood	Cornus florida	
1,2,3	Green ash	Fraxinus pennsylvanica	
1,2,3	Sycamore	Plantanus occidentalis	a
1,2,3	Bald Cyprus	Taxodium distichum	
1,2	River birch	Betula nigra	
1,2,3	Eastern cottonwood	Populus deltoides	a
1,2,3	Swamp Cottonwood	Populus heterophylla	a

These trees should all be provided as containerized plants 3' to 4' in height in spin-out containers for reasonable survivability. They should be planted on 8 foot centers (64 square feet per plant).

a Indicates species suitable for use as dormant wood cuttings, stakes or posts if desired. Species of willow and cottonwood do not require hormone treatment for rooting.

AEC 02921

Shrubs provide a viable understory for enhanced areas. Additionally, they provide browse and cover for wildlife and help prevent erosion. Shrub species will be randomly interspersed among tree species. They will be chosen from the following list and planted in groups of 3.

PLANT ZONE	COMMON NAME	SPECIES	NOTE
1	Bankers willow	Salix cottettii	a
1	Purple osier willow	Salix purpurea	a
1	Buttonbush	Cephalanthis occidentalis	a
1,2,3	Silky dogwood	Cornus amomum	
1,2,3	red-osier dogwood	Cornus stolonifera	a

Grasses and legumes will be planted over the entire riparian and berm section. The following seed mixture will be sown at the rate of 35 lbs per acre. The percentage of each seed is also shown in the table.

Perennial rye grass	15%
Foxtail millet	15%
Red top	10%
Birdsfoot trefoil	10%
Appalow lespedeza	50%

Areas planted with berm and riparian vegetation will not be cut or mowed in order to encourage the development of volunteer vegetation. Species of trees, shrubs, grasses and legumes which appear naturally will be allowed to remain in order to enhance the wildlife environment along the stream.

a. Indicates species suitable for use as dormant wood cuttings, stakes or posts if desired. Species of willow and cottonwood do not require hormone treatment for rooting.

AEC 02922

JACK A. HAMILTON & ASSOCIATES, INC.
Consulting Engineers & Surveyors
P.O. Box 471, 342 High Street
Flushing, Ohio 43977
(740) 968-4947
Fax (740) 968-4225

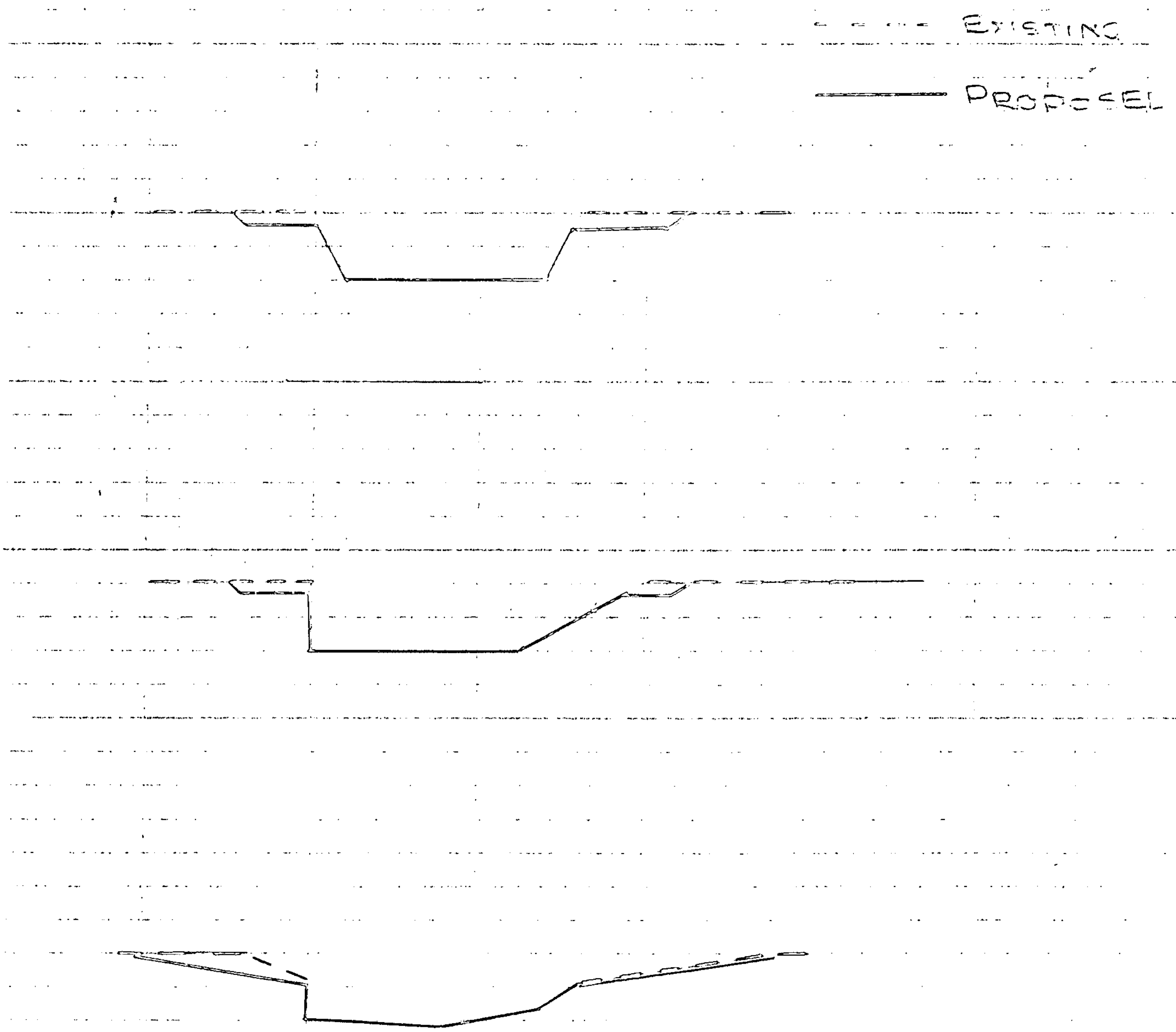
JOB [illegible] COMM #

SHEET NO [illegible] OF [illegible]

CALCULATED BY [illegible] DATE [illegible]

CHECKED BY DATE

TITLE [illegible]



FLOOD PLAIN DEVELOPMENT WILL BE GENERALLY AS SHOWN IN SECTIONS ABOVE.

FLOOD PLAIN DIMENSIONS WILL BE DETERMINED BASED UPON THE 1/2 YR - 6 HR STORM EVENT. THIS IS IN [illegible] WITH THE OHIO EPA [illegible] APPROVAL [illegible] PROCEDURE.

AEC 02923

ATTACHMENT #2

CORRESPONDENCE FROM
THE DIVISION OF NATURAL AREAS AND PRESERVES

Ohio Department of Natural Resources

BOB TAFT, GOVERNOR SAMUEL W. SPECK, DIRECTOR

Division of Natural Areas & Preserves
Stuart Lewis, Chief
1889 Fountain Square, Bldg. F-1
Columbus, OH 43224-1388
Phone: (614) 265-6453 Fax: (614) 267-3096

December 12, 2001

Donald M. Brafford
Jack A. Hamilton & Assoc., Inc.
342 High St. Box 471
Flushing OH, 43977

Dear Mr. Brafford:

After reviewing our Natural Heritage maps and files, I find the Division of Natural Areas and Preserves has no records of rare or endangered species within the project site of the Hamilton and Assoc. project Century Mine Surface Facility. The site is located in Sec. 3, Wayne Twp., Belmont Co., Hunter Quad.

There are no existing or proposed state nature preserves or scenic rivers at the project site. We are also unaware of any unique ecological sites, geologic features, breeding or non-breeding animal concentrations, champion trees, state parks, state forests, or wildlife areas within the project area.

Our inventory program has not completely surveyed Ohio and relies on information supplied by many individuals and organizations. Therefore, a lack of records for any particular area is not a statement that rare species or unique features are absent from that area. Although we inventory all types of plant communities, we only maintain records on the highest quality areas. Also we do not have data for all Ohio wetlands. The Division of Wildlife has a statewide wetland inventory that can give you additional data. Their phone number is 614-265-6300. For National wetlands Inventory maps, please contact Jim Given in the Division of Real Estate and Land Management at 614-265-6770.

Please contact me at 614-265-6409 if I can be of further assistance.

Sincerely,

Butch Grieszmer, Ecological Analyst
Support Services Group

e-mail: hamilton@1st.net

JACK A. HAMILTON & ASSOCIATES, INC.

www.hamiltonandassoc.com

CONSULTING ENGINEERS & SURVEYORS

Box 471, 342 High Street, Flushing, Ohio 43977 ◦ Phone (740) 968-4947 ◦ Fax (740) 968-4225

December 31, 2001

Ms. Abbott Stevenson
Ohio EPA Southeast District Office
2195 Front Street
Logan, Ohio 43138

SUBJECT: Belmont County
American Energy Corporation - Century Mine

Dear Abbott:

Enclosed is the Antidegradation Addendum for the captioned site. This application presents, as the Preferred Design Alternative, the discharge of Pond 002 effluent into Piney Creek.

Included for your use in evaluating this proposal are the following documents:

1.) The completed Antidegradation Addendum with Attachment #1 which specifically addresses Item #4) in the Addendum.

2.) A location map showing the location of Pond 002, streams, fresh water pond, and sewage treatment plant is included with the sewage plant Antidegradation Addendum.

Please advise me at your earliest convenience if additional information is necessary to process this application. Please note that this Antidegradation Addendum and P.T.I. are being submitted as site specific data for Pond 002 only, and does not apply to the sanitary sewer discharge, however, the antidegradation addendum for the sanitary sewer discharge is a part of this application.

Sincerely,

Jack A. Hamilton & Associates, Inc.

Ellen M. Greer

Cathy M. Bihlman, P.S. ◦ Donald M. Brafford, P.E. ◦ Jack A. Hamilton, P.S. ◦ Paul R. Hamilton, P.S. ◦ Charles W. Johnson, P.S. ◦ David J. Siembab, P.S. ◦ Terry L. Steffl, P.S.

e-mail: hamilton@1st.net

JACK A. HAMILTON & ASSOCIATES, INC.

www.hamiltonandassoc.com

CONSULTING ENGINEERS & SURVEYORS

Box 471, 342 High Street, Flushing, Ohio 43977 ◦ Phone (740) 968-4947 ◦ Fax (740) 968-4225

January 11, 2001

Ms. Abbott Stevenson
Ohio EPA Southeast District Office
2195 Front Street
Logan, Ohio 43138

SUBJECT: Belmont County
American Energy Corporation - Century Mine
Permit to Install #06 - 6555

Dear Ms Stevenson:

Enclosed is the Antidegradation Addendum for the captioned site. This application presents, as the Preferred Design Alternative, the discharge of treated sewage into Piney Creek.

Included for your use in evaluating this proposal are the following documents:

1.) The completed Antidegradation Addendum with Attachment #1 which specifically addresses Item #4) in the Addendum.

2.) A proposed mitigation plan is included as part of Attachment #1.

3.) The letter addressing threatened and endangered species and other environmentally sensitive issues from the Ohio Department of Natural Resources, Division of Natural Areas and Preserves.

4.) A permit map showing the location of the sewage plant, streams and fresh water pond which are mentioned in the Attachment.

Please advise me at your earliest convenience if further information is needed to process this application.

Sincerely,

JACK A. HAMILTON & ASSOCIATES, INC.

Donald M. Brafford

Cathy M. Bihlman, P.S. ◦ Donald M. Brafford, P.E. ◦ Jack A. Hamilton, P.S. ◦ Paul R. Hamilton, P.S. ◦ Charles W. Johnson, P.S. ◦ David J. Siembab, P.S. ◦ Terry L. Steffl, P.S.

Ohio EPA

DIVISION OF SURFACE WATER

Antidegration Addendum

In accordance with Ohio Administrative Code 3745-1-05, additional information may be required to complete your application for a permit to install or NPDES permit. For any application for which there might be an increase in the level of pollutants being discharged (NPDES and/or PTI) or for which there might be some activity taking place within a stream bed, the processing of the permit may have to go through various procedures as outlined in the above stated rule. The rule outlines various procedures for public participation as well as procedures pertaining to the levels of review necessary. The levels of review necessary depend on the degradation being considered/requested. The rule also outlines various exclusions from portions of the application and review requirements and waivers that the Director may grant as questions. The answers provided will allow the Ohio EPA to determine if additional information is needed. **All projects that require both an NPDES and PTI should submit both applications simultaneously to avoid going through the antidegradation process separately for each permit.**

A. **Applicant:** American Energy Corporation

Facility Owner: American Energy Corporation

Facility Location (city and county): Beallsville, Belmont County

Application or Plans Prepared By: Jack A. Hamilton & Associates, Inc.

Project Name: Sewage Treatment Plant Point Source Discharge

NPDES Permit Number (if applicable): OIL00091*ED OH0059552

B. **Antidegradation Applicability**

Is the application for? (check as many as apply):

____ Application with no direct surface water discharge (Projects that do not meet the applicability section of 3745-1-05(H) 1, i.e.. On site disposal, extensions of sanitary sewers spray irrigation, indirect discharger to POTW, etc.). (Complete Section E)

____ Renewal NPDES application or PTI application with no requested increase in loading of currently permitted pollutants (Complete Section E. Do not complete Sections C or D).

____ PTI and NPDES application for a new wastewater treatment works that will discharge to a surface water. (Complete Sections C and E)

____ An expansion/modification of an existing wastewater treatment works discharging to a surface water that will result in any of the following (PTI and NPDES): (Complete Section C and E)

- ☐ addition of any pollutant not currently in the discharge, or
- ☐ an increase in mass or concentration of any pollutant currently in the discharge, or
- ☐ an increase in any current pollutant limitation in terms of mass or concentration.

✓ PTI that involves placement of fill or installation of any portion of a sewerage system (i.e., sanitary sewers, pump stations, WWTP, etc.)within 300 feet of a stream bed. Please provide information on an attached sheet (i.e., number of stream crossings, fill placement, etc.) and complete section E.

_____ Initial NPDES permit for an existing treatment works with a wastewater discharge. (Complete Sections C, D and E)

_____ Renewal NPDES permit or modification to an effective NPDES permit that will result in any of the following: (Complete Section C and E)

- ▫ a new permit limitation for a pollutant that previously had no limitation, or
- ▫ an increase in any mass or concentration limitation of any pollutant that currently has a limitation.

_____ Other projects with no direct surface water discharge (i.e., on site disposal, extensions of sanitary sewers, spray irrigation, indirect discharger to POTW, etc.). (Complete Section E)

C. Antidegradation Information

1. Does the PTI and/or NPDES permit application meet an exclusion as outlined by OAC 3745-1-05(D)(1) of the Antidegradation rule?

   _____ Yes (Complete Question C.2)

   ✓ No (Complete Questions C.3 and C.4)

2. For projects that would be eligible for exclusions provide the following information.

   a. Provide justification for the exclusion.

   b. Identify the substances to be discharged, including the amount of regulated pollutants to be discharged in terms of mass and concentration.

   c. A description of any construction work, fill or other structures to occur or be placed in or near a stream bed.

3. Are your requesting a waiver as outlined by OAC 3745-1-05(D)(2-7) of the Antidegradation rule?

   ✓ No

   _____ Yes

   If you wish to pursue one of the waivers, please identify the waiver and submit the necessary information to support the request. Depending on the waiver requested, the information required under question C.4 is still required to complete the application.

4. For all projects that do <u>not</u> qualify for an exclusion a report must be submitted evaluating the preferred design alternative, non-degradation alternatives, minimal degradation alternatives, and mitigative techniques/measures for the design and operation of the activity. The information outlined below should be addressed in this report. If a waiver is requested, this section is still required.
   SEE ATTACHMENT #1

a. Describe the availability, cost effectiveness and technical feasibility of connecting to existing central or regional sewage collection and treatment facilities, including long range plans for sewer service outlined in state or local water quality management planning documents and applicable facility planning documents.

b. List and describe all government and/or privately sponsored conservation projects that may have been or will be specifically targeted to improve water quality or enhance recreational opportunities on the effected water resource.

c. Proved a brief description below of all treatment/disposal alternatives evaluated for this application. (If additional space is needed please attach to the end of this addendum).

Preferred design alternative: See Attachment #1

Non-degradation alternative (s): See Attachment #1

Minimal degradation alternative (s): See Attachment #1

Mitigative technique/measure (s): See Attachment #1

At a minimum, the following information must be included in the report for each alternative evaluated. See Attachment #1

d. Outline of the treatment/disposal system evaluated, including the costs associated with the equipment, installation, and continued operation and maintenance.

e. Identify the substances to be discharged, including the amount of regulated pollutants to be discharged in terms of mass and concentration.

f. Describe the reliability of the treatment/disposal system, including but not limited to the possibility of recurring operation and maintenance difficulties that would lead to increased degradation.

g. Describe any impacts to human health and the overall quality and value of the water resource.

h. Describe and provide an estimate of the important social and economic benefits to be realized through this proposed project. Include the number and types of jobs created and tax revenues generated.

i. Describe environmental benefits to be realized through this proposed degradation.

j. Describe and provide an estimate of the social and economic benefits that may be lost as a result of this project. Include the impacts on commercial and recreational use of the water resource.

k. Describe the environmental benefits lost as a result of this project. Include the impact on the aquatic life, wildlife, threatened or endangered species.

l. A description of any construction work, fill or other structures to occur or be placed in or near a stream bed.

m. Provide any other information that may be useful in evaluating this application.

D. Discharge Information

1. For treatment/disposal systems constructed pursuant to a previously issued Ohio EPA PTI, provide the following information:

PTI Number	06 -6555	
PTI Issuance Date	11-09-01	For sewage treatment plant
Initial Date of Discharge	NIA	

2. Has the appropriate NPDES permit application form been submitted including representative effluent data?

✓ Yes (go to E) The appropriation NPDES modification form is being submitted. There is no existing effluent data, sanitary facility is proposed.

_____ No (see below)

If no, submit the information as applicable under a OR b as follows:

a. For entities discharging process wastewater attach a completed 2C form.

b. For entities discharging wastewater of domestic origin attach the results of at least one chemical analysis of the wastestream for all pollutants for which authorization to discharge is being requested and a measurement of the daily volume (gallons per day) of wastewaters being discharge.

E. Base on my inquiry of the person or persons who mange the system or those persons directly responsible for gathering the information, the information is, to the best of my knowledge and belief, true, accurate and complete.

This section must be ~~signed~~ by the same responsible person who signed the accompanying permit application or certification as per 40 CFR 122.22.

Signature _____

Date 1/2/02

disk/Antiform
6/24/98

ATTACHMENT #1
TO OHIO ENVIRONMENTAL PROTECTION AGENCY
ANTIDEGRADATION ADDENDUM
CENTURY MINING COMPANY SEWAGE TREATMENT FACILITY
BELMONT COUNTY, OHIO

PREFERRED DESIGN ALTERNATIVE:

INTRODUCTION:

This sewage treatment installation has been designed to service a bathhouse and office complex for an underground mining operation.

This document addresses the requirements of Section C of the Ohio Environmental Protection Agency Antidegradation Addendum. The PREFERRED DESIGN ALTERNATIVE is addressed on Pages 1 thru 6. The NON DEGRADATION ALTERNATIVE is addressed on Pages 7 thru 10 and the MINIMAL DEGRADATION ALTERNATIVE is addressed on Pages 11 thru 13. The mitigative techniques to be incorporated during mining are described in detail in The MITIGATION PLAN included as ATTACHMENT #1 to this ADDENDUM.

ANSWERS TO SPECIFIC QUESTIONS ON THE APPLICATION:

4.a) DESCRIBE THE AVAILABILITY, COST EFFECTIVENESS AND TECHNICAL FEASIBILITY OF CONNECTING TO EXISTING CENTRAL OR REGIONAL SEWAGE COLLECTION AND TREATMENT FACILITIES INCLUDING LONG RANGE PLANS FOR SEWER SERVICE OUTLINED IN STATE OR LOCAL WATER QUALITY MANAGEMENT PLANNING DOCUMENTS AND APPLICABLE FACILITY PLANNING DOCUMENTS.

There are no central or regional sewers which are physically or economically available to the operation. The nearest sewage treatment plants to the site are at Barnesville or the Ohio Valley Mall. These sites are both several miles away. This information was obtained from the Belmont County Sanitary Sewer District on October 23, 2001.

Costs to run pipe and pump the distances involved would be prohibitive. The time required to complete this work including coordination with government agencies, permitting and construction, would not fit the necessary schedule of beginning operations.

AEC 02932

4.b) LIST AND DESCRIBE ALL GOVERNMENT AND/OR PRIVATELY SPONSORED CONSERVATION PROJECTS THAT MAY HAVE BEEN OR WILL BE SPECIFICALLY TARGETED TO IMPROVE WATER QUALITY OR ENHANCE RECREATIONAL OPPORTUNITIES ON THE AFFECTED WATER RESOURCE.

Inquiries were made of the county engineer, the county natural resources conservation service and the state department of natural resources to determine if any projects were planned or underway. There are none.

4.c) PROVIDE A BRIEF DESCRIPTION OF THE PREFERRED DESIGN TREATMENT/DISPOSAL ALTERNATIVE INCLUDING OPERATIONAL AND MAINTENANCE NEEDS.

This alternative would discharge treated sanitary water directly to Piney Creek. The discharge point would be approximately 2 ½ miles upstream of Captina Creek. The water would be run through a commercially produced treatment plant which includes primary treatment, sand filtration, chlorination and dechlorination prior to being discharged to the stream. The system also incorporates a backwater valve at the outlet and a bypass system to allow the effluent to be handled in a non-polluting manner in case of a plant failure.

The technology involved is state of the art sewage treatment. The discharge water quality is generally reliable when the equipment is properly maintained. Regular equipment observation and maintenance schedules will be followed so that proper maintenance will be assured.

4.d) OUTLINE OF THE TREATMENT/DISPOSAL SYSTEM EVALUATED, INCLUDING THE COSTS ASSOCIATED WITH THE EQUIPMENT, INSTALLATION AND CONTINUED OPERATION AND MAINTENANCE

The system conceived for this preferred design alternative consists of the following components:

> Gravity sewer pipes, a valve pit, a pump station and force main to move the raw sewage from the bathhouse to the treatment plant where it will be treated to meet applicable standards before being released to the receiving stream. There will be a backwater gate at the outlet to prevent flow of flood waters from the creek into the sewage handling system. There will be a bypass system to allow handling of the effluent in case of a plant failure or shut down.

The treatment plant is a package plant and will consist of a trash trap, a flow equalization tank, two aeration tanks, a clarifier, a sludge tank, a dosing tank, sand filters and a chlorine contact tank. A backwater valve will be installed at the outlet end of the discharge pipe to prevent flow of flood water into the system. This alternative will also have a bypass valve near the outlet end of the system. This valve will allow discharge to be loaded and hauled rather than being discharged to the receiving stream in case of a system breakdown.

Automatic controls will be included in the system to insure that performance will be as described. The treated water will meet requirements of all applicable permits.
Equipment and installation cost is projected to be $146,000.00 (One Hundred Forty Six Thousand Dollars). Operating and maintenance costs will range between $1,300.00 (One Thousand Three Hundred Dollars) and $4,000.00 (Four Thousand Dollars) annually.

4.e) IDENTIFY THE SUBSTANCES TO BE DISCHARGED, INCLUDING THE AMOUNT OF REGULATED POLLUTANTS TO BE DISCHARGED IN TERMS OF MASS AND CONCENTRATION.

Approximately 10,000 gallons per day of water will be treated. The substances to be discharged will be within the limitations shown in the following table:

PARAMETER	*SUMMER (mg/l)*	*WINTER (mg/l)*
$cBOD_5$	10	10
T.S.S.	12	12
Dissolved Oxygen	Greater than 6.0 at all times	
Ammonia	1.0	3.0
Chlorine Residual	0.019	
pH	6.5 - 9.0	
Fecal Coliform	1,000 (#/100 ml)	--

4.f) DESCRIBE THE RELIABILITY OF THE TREATMENT/DISPOSAL SYSTEM, INCLUDING BUT NOT LIMITED TO THE POSSIBILITY OF RECURRING OPERATION AND MAINTENANCE DIFFICULTIES THAT WOULD LEAD TO INCREASED DEGRADATION.

The proposed system is very reliable. No major maintenance is anticipated for at least one year after installation. During and following that period, normal maintenance and operating procedures should prevent breakdowns which could result in possible pollution of the receiving waters.

In the unlikely event of a failure or breakdown, an emergency bypass valve will be provided at the end of the discharge line. This valve will be closed and the plant shut down until haulage can be arranged at which time the effluent will be hauled to a public treatment facility.

AEC 02934

4.g) DESCRIBE ANY IMPACTS TO HUMAN HEALTH AND THE OVERALL QUALITY AND VALUE OF THE WATER RESOURCE.

No adverse impacts to human health are anticipated. Sewage water will be treated to meet requirements of the Ohio Environmental Protection Agency Permit to Install before being released to the receiving stream. In case of a plant breakdown, the sewage will be hauled to a public treatment facility as previously described.

The point source discharge into Piney Creek will cause a minimal degradation of that stream. Dilution of the effluent will assure that impacts on the receiving stream will be minimal. Our hydrology records indicate that the average daily flow in the stream is 7,000,000 GPD. The 10,000 gallon per day effluent from the treatment plant will have a negligible impact on the stream. The bypass system described elsewhere will allow disposal of the effluent before it reaches the stream in case of an unexpected plant failure or shutdown.

4.h) DESCRIBE AND PROVIDE AN ESTIMATE OF THE IMPORTANT SOCIAL AND ECONOMIC BENEFITS TO BE REALIZED THROUGH THIS PROPOSED PROJECT. INCLUDE THE NUMBER AND TYPES OF JOBS CREATED AND THE TAX REVENUES GENERATED.

Introduction:

Coal provides the most efficient and economical method of generating electrical energy and will continue to provide this service for a number of years in the future. More than half the electrical energy consumed presently in the United States is generated by coal burning facilities. Over 80% of that consumed in the State of Ohio is produced by coal fired power plants.

Wind, solar and hydro power generation methods are not capable of meeting demand at this time. Nuclear energy represents too large a potential for long term environmental impact and life safety. The natural gas supply and distribution systems are not sufficient to meet the demands of the electrical generating industry.

There have been recent indications that a shortage of electrical power is developing. Several reasons for this shortage have been set forth; however, the significant facts are: The demand for electricity has increased by over 100% since 1970. There has been a disproportionately small increase in generating capacity during that time. Furthermore, demand for electrical energy is projected to increase by another 30% to 40% between now and the year 2020.

Project Specifics:

Belmont County, the location of this mining operation, is one of 23 counties in the state which are categorized as distressed, situationally distressed or labor surplus areas by the most recent data available from the State of Ohio Department of Development, Office of Strategic Research.

Should the employment opportunity not be permitted to develop then the loss to the local economy would be significant. Belmont County is categorized as a distressed county by the Ohio Department of Development, Office of Strategic Research. This means that unemployment is 125% or greater of the most recent U.S. 5 year average unemployment rate; per capita income is at or below 80% of the U.S. per capita income; and 20% or more of the population lives below the poverty level.

This mining operation will support the direct employment of 333 people during the life of the operation which is estimated to be 30 years. During this time, $17,500,000.00 (Seventeen Million, Five Hundred Thousand Dollars) will be paid in annual payrolls. $7,300,000.00 (Seven Million, Three Hundred Thousand Dollars) will be paid annually in taxes and.$5,000,000.00 (Five Million Dollars) will be paid in royalties. Additionally, $33,000,000.00 (Thirty three Million Dollars) will be spent for supplies and nearly $5,000,000.00 (Five million Dollars) will be paid in insurances.

It has been statistically proven that every mining job supports between four and ten jobs in related industries or services. These related industries and services include: utility supply, transportation, material and fuel supply, and other activities which directly or indirectly support the mining operation. They may also include domestic services such as lawn and garden employees, and day care and baby sitting services employed by the mining personnel and their families.

There will be other benefits from this operation which will trickle down into the local economy. General merchants will undoubtably experience sales from the mine employees which they would not experience if the group were unemployed, were employed in other geographic locations, or were employed in lesser paying jobs.

4.i) DESCRIBE ENVIRONMENTAL BENEFITS TO BE REALIZED THROUGH THIS PROPOSED PROJECT.

This project will provide sanitary service, including shower facilities, to 333 people employed by the mining company. Installation of the project will keep raw sewage from being discharged directly into Piney Creek .

4.j) DESCRIBE AND PROVIDE AN ESTIMATE OF THE SOCIAL AND ECONOMIC BENEFITS THAT MAY BE LOST AS A RESULT OF THIS PROJECT. INCLUDE THE IMPACTS ON COMMERCIAL AND RECREATIONAL USE OF THE WATER RESOURCE.

There should be no loss of social or economic benefits from this mining operation. The employment provided will improve long term economic conditions. Much larger economic losses would result if the project was not undertaken. (See Item #4.h) of this document.

AEC 02936

Sewage will be retained and treated as previously discussed. Water quality will be lowered within limits set forth in the TABLE which is part of Item # 4.e) of this design alternative. This water quality would be applicable at the outlet of the plant. Discharged water would be further diluted by the flow in Piney Creek. The area is generally isolated from any tourist or other public attraction.

4.k) DESCRIBE THE ENVIRONMENTAL BENEFITS LOST AS A RESULT OF THIS PROJECT. INCLUDE THE IMPACT ON AQUATIC LIFE, WILDLIFE THREATENED OR ENDANGERED SPECIES.

Water quality will be affected to the extent allowed as previously discussed. Assuming that the limitations set by the P.T.I. are non-detrimental to aquatic life, Impacts to aquatic life and wildlife should be unchanged during mine operations.

According to the Ohio Department of Natural Resources, Division of Natural Areas and Preserves, there are no threatened or endangered species and no regionally significant breeding or non-breeding waterfowl, neotropical song birds or shore bird concentration areas on the site. The confirmation letter from DNAP is included as an Attachment to this document.

4.l) A DESCRIPTION OF ANY CONSTRUCTION WORK, FILL OR OTHER STRUCTURES TO OCCUR OR BE PLACED IN OR NEAR A STREAM BED.

No direct impacts will occur below the normal pool level of the stream. Fill was placed to elevate the new plant above the 100 year flood level; however, no fill was placed below the ordinary high water mark of the stream. The sewage outlet pipe will be located above the normal pool level of the stream. It will contain a tail wall and a backwater valve as previously described. Stone riprap will be placed between the plant discharge pipe outlet and the waterline. This riprap will extend below the ordinary high water line of the stream and will be the only impact on the stream bed.

4.m) PROVIDE ANY OTHER INFORMATION THAT MAY BE USEFUL IN EVALUATING THIS APPLICATION.

AEC 02937

ATTACHMENT #1
TO OHIO ENVIRONMENTAL PROTECTION AGENCY
ANTI DEGRADATION ADDENDUM
CENTURY MINING COMPANY SEWAGE TREATMENT FACILITY
BELMONT COUNTY, OHIO

NON DEGRADATION ALTERNATIVE:

INTRODUCTION:

The commentary here is the same as that under the INTRODUCTION Section on Page #1.

ANSWERS TO SPECIFIC QUESTIONS ON THE APPLICATION:

4.a) DESCRIBE THE AVAILABILITY, COST EFFECTIVENESS AND TECHNICAL FEASIBILITY OF CONNECTING TO EXISTING CENTRAL OR REGIONAL SEWAGE COLLECTION AND TREATMENT FACILITIES, INCLUDING LONG RANGE PLANS FOR SEWER SERVICE OUTLINED IN STATE OR LOCAL WATER QUALITY MANAGEMENT PLANNING DOCUMENTS AND APPLICABLE FACILITY PLANNING DOCUMENTS.

The commentary here is the same as that under Section 4.a) in the Preferred Design Alternative.

4.b) LIST AND DESCRIBE ALL GOVERNMENT AND/OR PRIVATELY SPONSORED CONSERVATION PROJECTS THAT MAY HAVE BEEN OR WILL BE SPECIFICALLY TARGETED TO IMPROVE WATER QUALITY OR ENHANCE RECREATIONAL OPPORTUNITIES IN THE AFFECTED WATER RESOURCE.

The commentary here is the same as that under Section 4.b) in the Preferred Design Alternative.

4.c) PROVIDE A BRIEF DESCRIPTION OF THE NON DEGRADATION DESIGN TREATMENT/DISPOSAL ALTERNATIVE INCLUDING OPERATIONAL AND MAINTENANCE NEEDS.

Two concepts were investigated for this alternative. The first was an agricultural spray-back system. The second was a treatment wetland system.

AEC 02938

4.d) OUTLINE OF THE TREATMENT/DISPOSAL SYSTEM EVALUATED, INCLUDING THE COSTS ASSOCIATED WITH THE EQUIPMENT, INSTALLATION AND CONTINUED OPERATION AND MAINTENANCE.

If the spray-back system could be installed on nearby land, the cost of installation would increase by approximately 50% over the cost of installing the preferred design alternative. Cost of maintenance would also increase and reliability would decrease.

If the wetland system were used, the cost of installation would be approximately the same as that to install the treatment plant. However, costs of monitoring, maintenance and record-keeping would be extraordinary.

The following additional items were part of the investigation:

1.) The mining company does not own adequate land in close proximity to the surface facilities to economically conduct either activity.

2.) Owners of neighboring farms are not interested in having treated or untreated sewer water placed upon their land.

3.) If either system were installed on land isolated from the surface facility site, then maintenance and record keeping costs would increase proportionately.

4.) If arrangements for a suitable off-site location could be made, the overall cost of installation and maintenance of either of these systems appears to be excessive compared with the system proposed.

6.) The mining company is not interested in the environmental opposition and resultant negative public relations which could result if either of these sewage disposal options were proposed.

4.e) IDENTIFY THE SUBSTANCES TO BE DISCHARGED, INCLUDING THE AMOUNT OF REGULATED POLLUTANTS TO BE DISCHARGED IN TERMS OF MASS AND CONCENTRATION

Substances to be discharged would be as set forth in the table on Page 3 of this document.

4.f) DESCRIBE THE RELIABILITY OF THE TREATMENT/DISPOSAL SYSTEM, INCLUDING BUT NOT LIMITED TO THE POSSIBILITY OF RECURRING OPERATION AND MAINTENANCE DIFFICULTIES THAT WOULD LEAD TO INCREASED DEGRADATION.

Reliability of either system is not known while there is considerable experience with the proposed preferred treatment facility.

AEC 02939

There are more parts to be maintained in the spray back system. Additional pumping systems, piping and spray heads would have to be monitored and maintained. This would also contribute to much higher costs of operation.

Treatment wetlands are apparently demanding in terms of monitoring, maintenance and record keeping. They are a specialized sewage treatment system which should be operated under the full-time supervision or observation of a sewage specialist. This would be an addition, full time cost to the operator.

4.g) DESCRIBE ANY IMPACTS TO HUMAN HEALTH AND THE OVERALL QUALITY AND VALUE OF THE WATER RESOURCE.

No water resource would be affected by this alternative. Impacts on human health would not be an issue as long as the treatment facility functioned correctly. For exceptions to this statement, see commentary under this paragraph in previous sections.

4.h) DESCRIBE AND PROVIDE AN ESTIMATE OF THE IMPORTANT SOCIAL AND ECONOMIC BENEFITS TO BE REALIZED THROUGH THIS PROPOSED PROJECT. INCLUDE THE NUMBER AND TYPES OF JOBS CREATED AND THE TAX REVENUES GENERATED.

The response to this question is the same as that in the Preferred Design Alternative on Page 4 of this document.

4.i) DESCRIBE ENVIRONMENTAL BENEFITS TO BE REALIZED THROUGH THIS PROPOSED PROJECT.

The response to his question is the same as that in the Preferred Design Alternative on Page 5 of this document.

4.j) DESCRIBE AND PROVIDE AN ESTIMATE OF THE SOCIAL AND ECONOMIC BENEFITS THAT MAY BE LOST AS A RESULT OF THIS PROJECT. INCLUDE THE IMPACTS ON COMMERCIAL AND RECREATIONAL USE OF THE WATER RESOURCE.

The non degradation alternative, by definition does not permit impacts to streams or other natural water bodies. The social and economic benefits lost if this project is not permitted would far outweigh those lost if the project proceeds.

4.k) DESCRIBE THE ENVIRONMENTAL BENEFITS LOST AS A RESULT OF THIS PROJECT. INCLUDE THE IMPACT ON AQUATIC LIFE, WILDLIFE THREATENED OR ENDANGERED SPECIES.

The response to this question is the same as that in the Preferred Design Alternative on Page 5 of this document.

AEC 02940

4.l) A DESCRIPTION OF ANY CONSTRUCTION WORK, FILL OR OTHER STRUCTURES TO OCCUR OR BE PLACED IN OR NEAR A STREAM BED.

There would be no work done or facilities installed in any stream in this alternative.

4.m) PROVIDE ANY OTHER INFORMATION THAT MAY BE USEFUL IN EVALUATING THIS APPLICATION.

AEC 02941

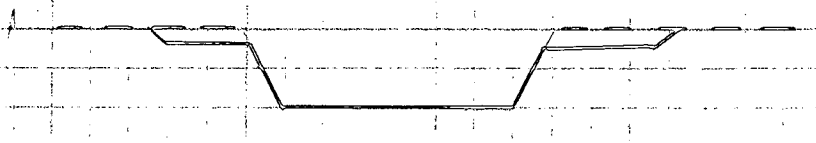
JACK A. HAMILTON & ASSOCIATES, INC.
Consulting Engineers & Surveyors
P.O. Box 471, 342 High Street
Flushing, Ohio 43977
(740) 968-4947
Fax (740) 968-4225

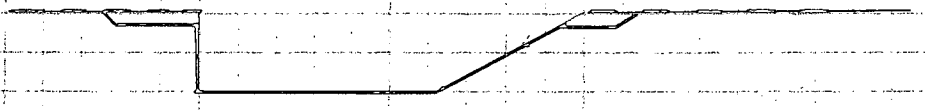
SHEET NO M-4 OF 4

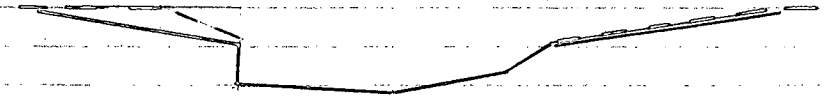
CALCULATED BY DMB DATE 12-11-01

CHECKED BY _____ DATE _____

TITLE TYPICAL STREAM RECONST.







- - - - EXISTING

——— PROPOSED

FLOOD PLAIN DEVELOPMENT WILL BE GENERALLY AS SHOWN IN SECTIONS ABOVE.

FLOOD PLAIN DIMENSIONS WILL BE DETERMINED BASED UPON THE 1½YR - 6 HR STORM EVENT. THIS IS IN CONFORMANCE WITH THE OH. EPA - ODNR JOINTLY APPROVED STREAM RECONSTRUCTION PROCEDURE.

Ohio Department of Natural Resources

BOB TAFT, GOVERNOR SAMUEL W. SPECK, DIRECTOR

Division of Natural Areas & Preserves
Stuart Lewis, Chief
1889 Fountain Square, Bldg. F-1
Columbus, OH 43224-1388
Phone: (614) 265-6453 Fax: (614) 267-3096

December 12, 2001

Donald M. Brafford
Jack A. Hamilton & Assoc., Inc.
342 High St. Box 471
Flushing OH, 43977

Dear Mr. Brafford:

After reviewing our Natural Heritage maps and files, I find the Division of Natural Areas and Preserves has no records of rare or endangered species within the project site of the Hamilton and Assoc. project Century Mine Surface Facility. The site is located in Sec. 3, Wayne Twp., Belmont Co., Hunter Quad.

There are no existing or proposed state nature preserves or scenic rivers at the project site. We are also unaware of any unique ecological sites, geologic features, breeding or non-breeding animal concentrations, champion trees, state parks, state forests, or wildlife areas within the project area.

Our inventory program has not completely surveyed Ohio and relies on information supplied by many individuals and organizations. Therefore, a lack of records for any particular area is not a statement that rare species or unique features are absent from that area. Although we inventory all types of plant communities, we only maintain records on the highest quality areas. Also we do not have data for all Ohio wetlands. The Division of Wildlife has a statewide wetland inventory that can give you additional data. Their phone number is 614-265-6300. For National wetlands Inventory maps, please contact Jim Given in the Division of Real Estate and Land Management at 614-265-6770.

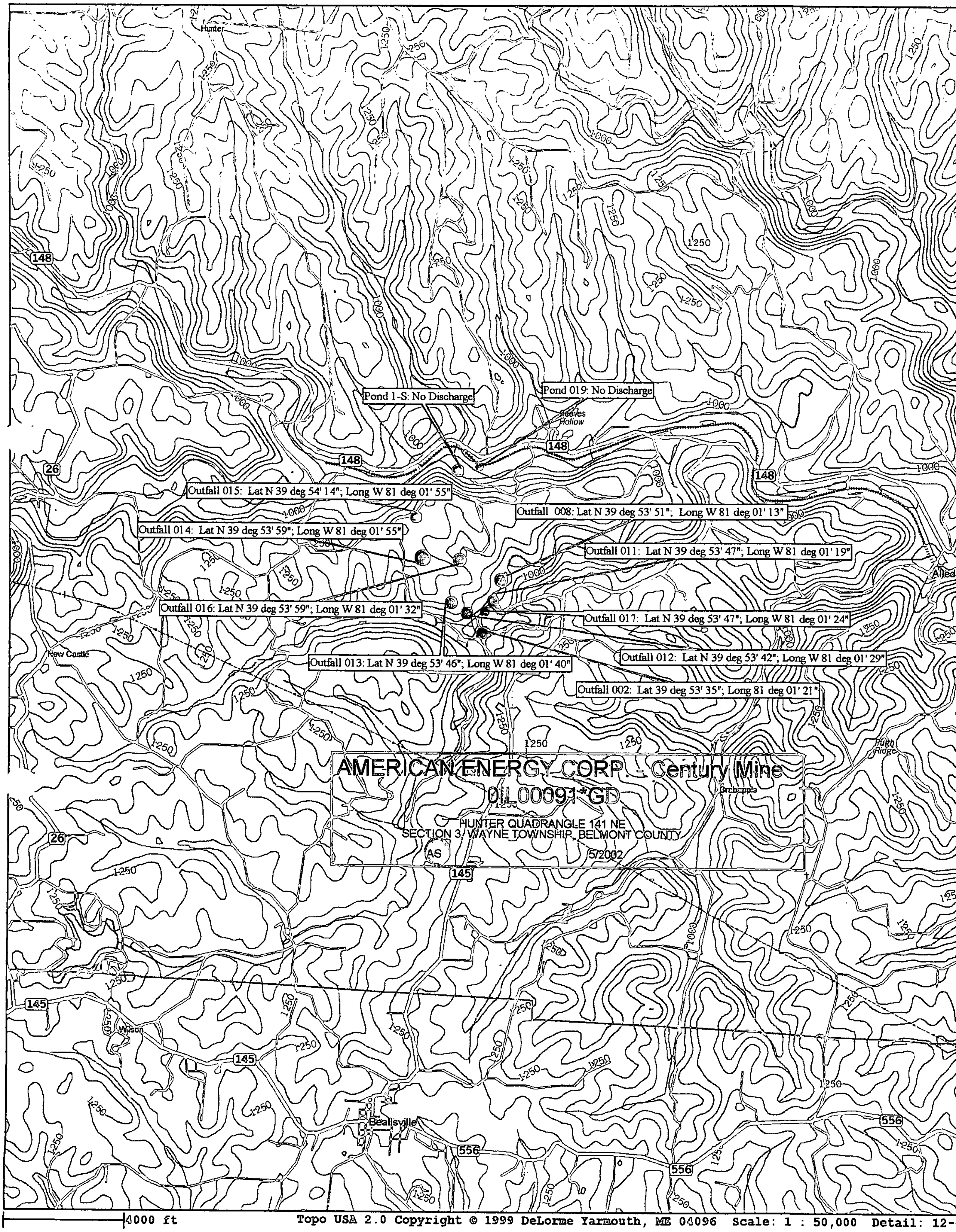
Please contact me at 614-265-6409 if I can be of further assistance.

Sincerely,

Butch Grieszmer, Ecological Analyst
Support Services Group

ATTACHMENT #2

CORRESPONDENCE FROM
THE DIVISION OF NATURAL AREAS AND PRESERVES



4000 ft Topo USA 2.0 Copyright © 1999 DeLorme Yarmouth, ME 04096 Scale: 1 : 50,000 Detail: 12-0

AEC 02945

American Energy Corp-Century Mine

Location

Wayne Twp Rd 228, Sec. 3

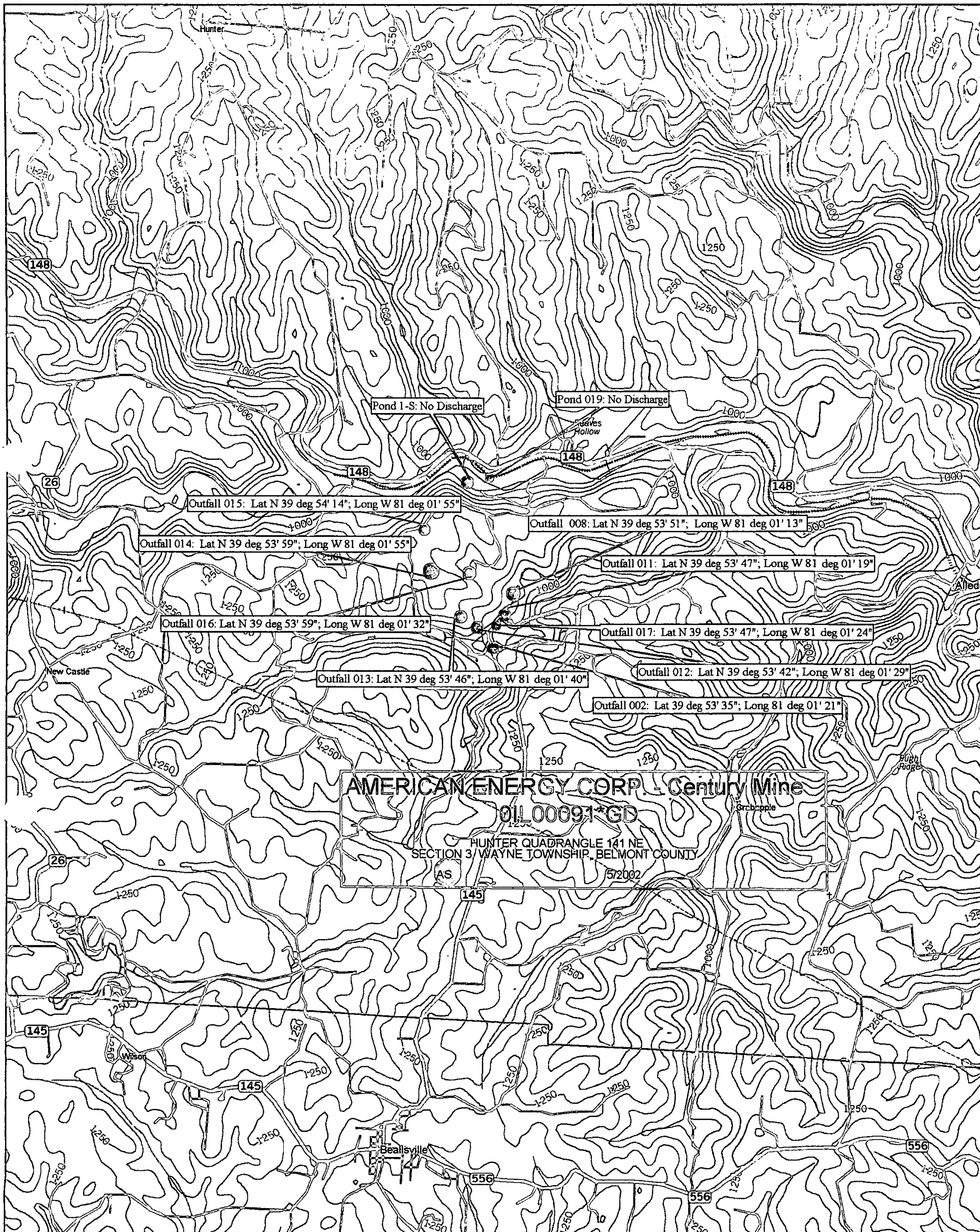
EDM No 3496

Armstrong Mills OH 43904

County: Belmont

Permit History

App. No.	OEPA No.	Effective Date	Expiration Date	Status:	Type of Permit
OH0059552	0IL00091*AD	07/10/1978	07/09/1983	EXPIRED	Converted Permit
OH0059552	0IL00091*BD	08/29/1979	07/09/1983	EXPIRED	Converted Permit
OH0059552	0IL00091*CD	04/28/1988	04/25/1993	EXPIRED	Converted Permit
OH0059552	0IL00091*DD	03/01/1991	04/25/1993	EXPIRED	Converted Permit
OH0059552	0IL00091*ED	02/01/1994	01/31/1999	EXPIRED	Converted Permit
OH0059552	0IL00091*FD	08/01/2002	07/31/2007	ACTIVE	SWIMS Permit



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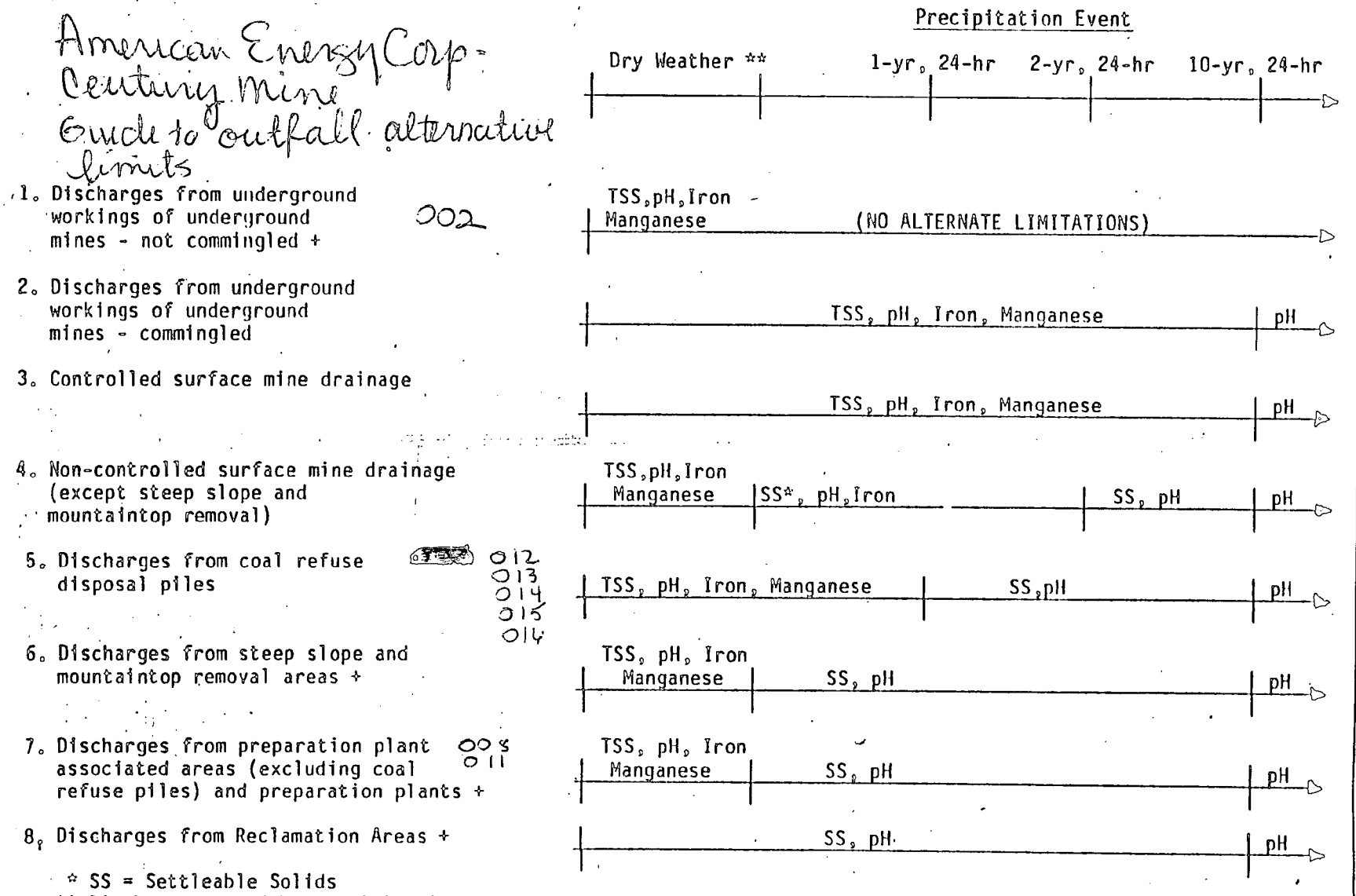
[FR Doc. 85-23778 Filed 10-8-85; 8:45 am]
BILLING CODE 6560-50-C

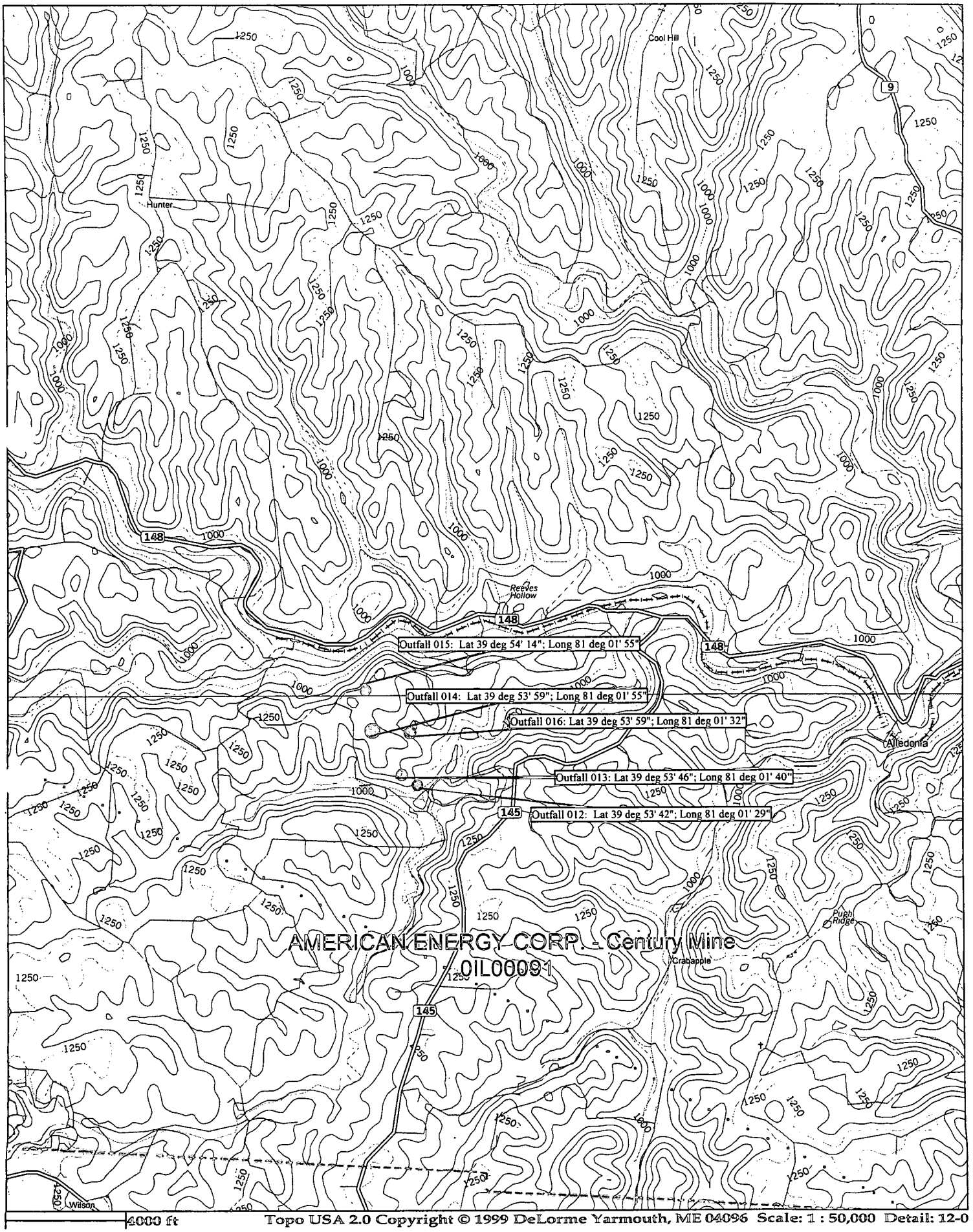
APPENDIX A
ALTERNATE STORM LIMITATIONS
FOR ACID OR FERRUGINOUS MINE DRAINAGE

American Energy Corp - Century Mine
Guide to outfall alternative limits



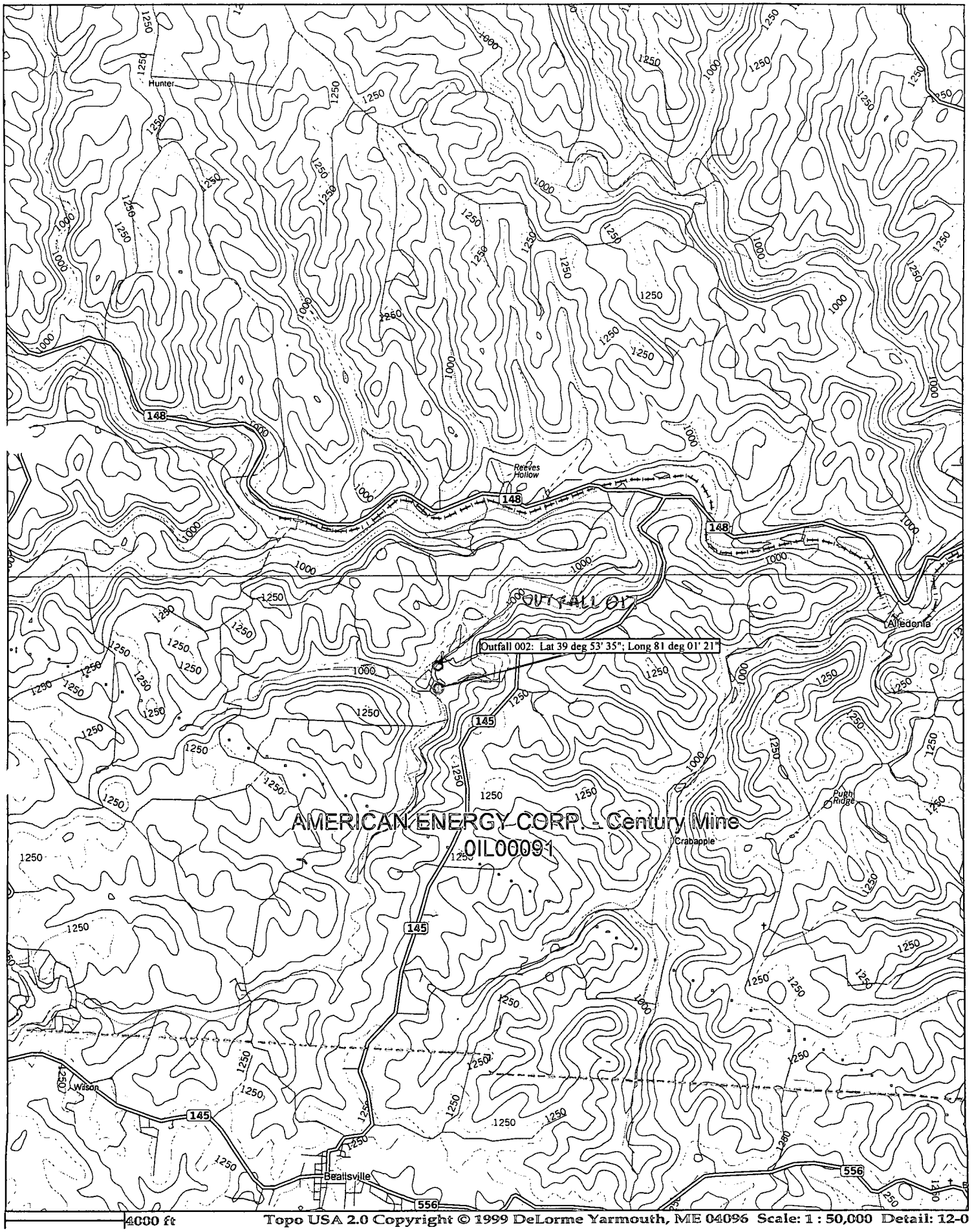
* SS = Settleable Solids
** Discharge caused by precipitation
\+ These categories do not differ from the Oct. 13, 1982 regulation.

AEC 02948



OUTFALLS ADDED THRU PTI 06-6766

AEC 02949



OUTFALLS ADDED THRU PTI 06-6778

Ohio Environmental Protection Agency
Application for Modification of Ohio NPDES Permit

For Agency Use

Application Number: OH0059552
Date Received: 1-14-02
Year Month Day

1. Number of permit for which modification is being requested OIL00091*ED, OH0059552

2. Name of organization responsible for facility American Energy Corporation

3. Address, location, and telephone number of facility producing discharge:

A. Name American Energy Corporation

B. Mailing Address:

1. Mailing Address 43521 Mayhugh Hill Road

2. City Beallsville

3. State Ohio 4. Zip Code 43716

C. Location:

1. Street Township Road 88, Wayne Twp., Section 3, off and west of St. Rt. 145

2. City 3 miles north of Beallsville 3. County Belmont

D. Telephone No. (740) 926-9152
Area Code

200.00 1-14-02
2676 1-10-02

4. Describe in detail the provision(s) of the permit the applicant wishes to modify.

Part I, Page 2 of 11, Item 1.

5. Describe in detail the reason a modification is desired. (See rule 3745-33-06 of the Ohio Administrative Code [formerly OEPA Regulation EP-31-06] for grounds for modification.)

Due to reactivation of the underground mine and surface facilities at this site, monitoring of outfall pond 002 will need to be reactivated once again for mine water storage and distribution. Monitoring of Pond 002 will need to be reactivated.

6. Name of receiving water or waters Piney Creek

7. Describe requested modification in sufficient detail to allow Ohio Environmental Protection Agency personnel to process your request. If a Permit to Install is required under Chapter 3745-31 of the Ohio Administrative Code (formerly Ohio EPA Regulation EP-30) attach a completed application for a Permit to Install and make no other entries in this section. If a Permit to Install is not required and additional space is needed, provide the additional information on 8-½ by 11 bond paper and mark "Item 7, Continued" in the upper left hand corner of each extra sheet.

Pond 002 (also referred to as Mine Water Pond 002, or Outfall OIL00091002) was currently included in NPDES Permit No. OIL00091*CD. Effective March 1, 1991, the NPDES permit was modified to delete Final Effluent Limitations and Monitoring Requirements for Pond 002. Due to reactivation of the underground mine previously associated with Pond 002, the current operator needs to utilize this pond in its previous capacity, for storage of water from the underground mine, distribution of water from Pond 002 to the underground mine for dust control, and if necessary, discharge of water from Pond 002 to Piney Creek through existing underground pipelines.

[This application must be signed by the person who applied for the original permit or some other person eligible under Rule 3745-33-03(D) of the Ohio Administrative Code (formerly OEPA Regulation EP-31-03(D)].

I certify that I am familiar with the information contained in the application and that to the best of my knowledge and belief such information is true, complete, and accurate.

Robert D. Moore
Printed Name of Person Signing

President
Title

1/2/02
Date Application Signed

Signature of Applicant

Mail or take this form to the Ohio EPA District Office to which you send monitoring reports.

OEPA-NPDES-18

Ohio Environmental Protection Agency
Application for Modification of Ohio NPDES Permit

For Agency Use

Application Number

Date Received

Year Month Day

1. Number of permit for which modification is being requested OIL00091*ED, OH0059552

2. Name of organization responsible for facility American Energy Corporation

3. Address, location, and telephone number of facility producing discharge:

A. Name American Energy Corporation

B. Mailing Address:

1. Mailing Address 43521 Mayhugh Hill Road

2. City Beallsville

3. State Ohio 4. Zip Code 43716

C. Location:

1. Street Township Road 88, Wayne Twp., Section 3, off and west of St. Rt. 145

2. City 3 miles north of Beallsville 3. County Belmont

D. Telephone No. (740) 926-9152
Area Code

4. Describe in detail the provision(s) of the permit the applicant wishes to modify.

Part I, Page 2 of 11, Item 1.

5. Describe in detail the reason a modification is desired. (See rule 3745-33-06 of the Ohio Administrative Code [formerly OEPA Regulation EP-31-06] for grounds for modification.)

Due to reactivation of the underground mine and surface facilities at this site, a refuse disposal area is necessary to eliminate trucking of coal mine waste off-site. Five (5) additional outfall ponds are necessary for the proposed refuse disposal area.

6. Name of receiving water or waters Piney Creek

7. Describe requested modification in sufficient detail to allow Ohio Environmental Protection Agency personnel to process your request. If a Permit to Install is required under Chapter 3745-31 of the Ohio Administrative Code (formerly Ohio EPA Regulation EP-30) attach a completed application for a Permit to Install and make no other entries in this section. If a Permit to Install is not required and additional space is needed, provide the additional information on 8-½ by 11 bond paper and mark "Item 7, Continued" in the upper left hand corner of each extra sheet.

Outfall ponds 012, 013, 014, 015, and 016 are proposed to be constructed to control drainage from the proposed refuse disposal site. These ponds will be utilized for control of sediment and water treatment, if treatment is necessary. The ponds will be built as outlined in the Engineers Report which accompanies this application.

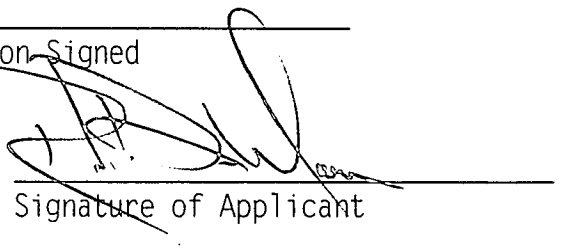
[This application must be signed by the person who applied for the original permit or some other person eligible under Rule 3745-33-03(D) of the Ohio Administrative Code (formerly OEPA Regulation EP-31-03(D)].

I certify that I am familiar with the information contained in the application and that to the best of my knowledge and belief such information is true, complete, and accurate.

Robert D. Moore
Printed Name of Person Signing

President
Title

12/20/01
Date Application Signed



Signature of Applicant

Mail or take this form to the Ohio EPA District Office to which you send monitoring reports.

OEPA-NPDES-18

ATTACHMENT #1

MITIGATION PLAN

MITIGATION PLAN
CENTURY MINE SEWAGE TREATMENT FACILITY
AMERICAN ENERGY CORPORATION
BELMONT COUNTY, OHIO

INTRODUCTION:

The preferred design alternative will result in minor degradation of the receiving stream, Piney Creek. The degradation will result from the discharge of 10,000 gallons per day (GPD) of treated sanitary sewer effluent into Piney Creek. This stream has an average flow rate of 7 million gallons per day (MGPD) according to our hydrology records. This average flow rate was based upon averages of regular, periodic high and low flow observations over a period of four years.

BACKGROUND:

Treated sewage effluent from the plant will be 10,000 GPD. This flow will be divided into three segments because of the shift schedule in the mine. The peak flow will be approximately 4,400 gallon following the afternoon shift. Dividing this flow by 1/3 the average daily flow in Piney Creek yields a dilution ratio of:

$$4.4 \times 10^{3} / 2.33 \times 10^{6} = 1.89 \times 10^{-3} \text{ or } 0.0018:1.$$

Based upon the flows during the other shifts, the dilution ratio at this rate of flow will be:

$$2.8 \times 10^{3} / 2.33 \times 10^{6} = 1.20 \times 10^{-3} \text{ or } 0.0012:1.$$

6,910 feet of stream and 1.8 acres of wetland will be disturbed by mining surface activities. Mitigative reconstruction for these disturbances will be performed. This mitigation has been described, submitted and permitted separately. The stream mitigation will consist of the development of a flood plain along Piney Creek and Long Run. The wetland mitigation will be undertaken in the old fresh water pond in Long Run.

There are 8,300 feet of stream on the site which will not be disturbed by mining activities. This length of stream includes segments of Piney Creek and Long Run. 6,910 feet of this available stream will be used for mitigation of other stream disturbances and 1,035 feet will be used for mitigation of wetlands disturbances.

STREAM MITIGATION:

It is proposed to add 100 feet of stream development along Long Run and Piney Creek to mitigate for this discharge. Both of these streams are deeply incised along certain reaches and contain naturally formed flood plains in others. Mitigation will consist of developing a flood plain along the streams where none exists now, if physically possible, and enhancing existing flood plains by planting vegetation acclimated to the environment. Riparian and berm vegetation will be established in the newly developed flood plain and the adjacent area.

Flood plain geometry will be developed based upon the 11/2 year - 6 hour storm event. Typical stream cross-sections showing flood plain development are included as Sheet -M-4-.

STREAM RIPARIAN ZONES AND BERMS:

NOTE: A plant specialist should be consulted to assure establishment of stream vegetation. The establishment of these areas is critical to the acceptability of the mitigation effort by the regulatory agencies.

A riparian zone will be established between the edge of the water and the top of the bank. A berm will be established from the top of the bank for a distance of 2 ½ times the bottom width of the stream or 50 feet except in areas where this would interfere with mining operations. In this case, the flood plain only would be enhanced. These areas will be planted with a mixture of trees and shrubs selected from the table below. Trees and shrubs will be interspersed on an 8 foot by 8 foot grid (each tree will occupy 64 square feet). Plant zones shown in the table are defined as follows:

Plant Zone #1: Is below the level of the normal waterline to the upper limit of the saturated area kept moist by capillary water movement. This zone includes the greatest potential for periodic inundation and the least moisture stress.

Plant Zone #2: is from the upper limit of zone #1 to 2-3 feet from the top of the bank. This area may be subject to rapid drying and greater moisture stress.

Plant Zone #3: is an area from 2-3 feet below the top of the bank to a minimum of 30 feet into the flood plain.

PLANT ZONE	COMMON NAME	SPECIES	NOTE
1	White willow	Salix alba	a
1	Black willow	Salix nigra	a
1	Sandbar willow	Salix interior	a
1	Carolina willow	Salix caroliniana	a
1	Peach leaved willow	Salix amygadaloides	a
1,2,3	Flowering dogwood	Cornus florida	
1,2,3	Green ash	Fraxinus pennsylvanica	
1,2,3	Sycamore	Plantanus occidentalis	a
1,2,3	Bald Cyprus	Taxodium distichum	
1,2	River birch	Betula nigra	
1,2,3	Eastern cottonwood	Populus deltoides	a
1,2,3	Swamp Cottonwood	Populus heterophylla	a

These trees should all be provided as containerized plants 3' to 4' in height in spin-out containers for reasonable survivability. They should be planted on 8 foot centers (64 square feet per plant).

a Indicates species suitable for use as dormant wood cuttings, stakes or posts if desired. Species of willow and cottonwood do not require hormone treatment for rooting.

AEC 02957

Shrubs provide a viable understory for enhanced areas. Additionally, they provide browse and cover for wildlife and help prevent erosion. Shrub species will be randomly interspersed among tree species. They will be chosen from the following list and planted in groups of 3.

PLANT ZONE	COMMON NAME	SPECIES	NOTE
1	Bankers willow	Salix cottettii	a
1	Purple osier willow	Salix purpurea	a
1	Buttonbush	Cephalanthis occidentalis	a
1,2,3	Silky dogwood	Cornus amomum	
1,2,3	red-osier dogwood	Cornus stolonifera	a

Grasses and legumes will be planted over the entire riparian and berm section. The following seed mixture will be sown at the rate of 35 lbs per acre. The percentage of each seed is also shown in the table.

Perennial rye grass	15%
Foxtail millet	15%
Red top	10%
Birdsfoot trefoil	10%
Appalow lespedeza	50%

Areas planted with berm and riparian vegetation will not be cut or mowed in order to encourage the development of volunteer vegetation. Species of trees, shrubs, grasses and legumes which appear naturally will be allowed to remain in order to enhance the wildlife environment along the stream.

a. Indicates species suitable for use as dormant wood cuttings, stakes or posts if desired. Species of willow and cottonwood do not require hormone treatment for rooting.

AEC 02958

ATTACHMENT #1
TO OHIO ENVIRONMENTAL PROTECTION AGENCY
ANTI DEGRADATION ADDENDUM
CENTURY MINING COMPANY SEWAGE TREATMENT FACILITY
BELMONT COUNTY, OHIO

MINIMAL DEGRADATION ALTERNATIVE:

INTRODUCTION:

This commentary is identical to that in the INTRODUCTION on PAGE 1 of this document.

ANSWERS TO SPECIFIC QUESTIONS ON THE APPLICATION:

4.a) DESCRIBE THE AVAILABILITY, COST EFFECTIVENESS AND TECHNICAL FEASIBILITY OF CONNECTING TO EXISTING CENTRAL OR REGIONAL SEWAGE COLLECTION AND TREATMENT FACILITIES, INCLUDING LONG RANGE PLANS FOR SEWER SERVICE OUTLINED IN STATE OR LOCAL WATER QUALITY MANAGEMENT PLANNING DOCUMENTS AND APPLICABLE FACILITY PLANNING DOCUMENTS.

The commentary here is the same as that under Section 4.a) in the Preferred Design Alternative.

4.b) LIST AND DESCRIBE ALL GOVERNMENT AND/OR PRIVATELY SPONSORED CONSERVATION PROJECTS THAT MAY HAVE BEEN OR WILL BE SPECIFICALLY TARGETED TO IMPROVE WATER QUALITY OR ENHANCE RECREATIONAL OPPORTUNITIES IN THE AFFECTED WATER RESOURCE.

The commentary here is the same as that under Section 4.b) in the Preferred Design Alternative.

4.c) PROVIDE A BRIEF DESCRIPTION OF THE MINIMAL DEGRADATION TREATMENT/DISPOSAL ALTERNATIVE INCLUDING OPERATIONAL AND MAINTENANCE NEEDS.

This alternative would treat sewage effluent in the package treatment plant previously described and discharge treated water to the process water supply pond. This pond has a capacity of 1,500,000 gallon. Although the combined water source would be used to supply dust control water for the underground mining machine, the 10,000 gallon per day of treated

AEC 02959

sewage effluent would have little impact on the water source. The dilution factor is significant and the intake for the miner would be located at the opposite end of the pond from the sewage outlet.

4.d) OUTLINE OF THE TREATMENT/DISPOSAL SYSTEM EVALUATED, INCLUDING THE COSTS ASSOCIATED WITH THE EQUIPMENT, INSTALLATION AND CONTINUED OPERATION AND MAINTENANCE

The treatment system is identical with that described in the Preferred Design Alternative except that the sewage effluent would be discharged to the process water pond instead of to Piney Creek. The disposal system is described in Section 4.c) of this Design Alternative.

4.e) IDENTIFY THE SUBSTANCES TO BE DISCHARGED, INCLUDING THE AMOUNT OF REGULATED POLLUTANTS TO BE DISCHARGED IN TERMS OF MASS AND CONCENTRATION

The response to this question is the same as for Item #4.e) in the other design alternatives.

4.f) DESCRIBE THE RELIABILITY OF THE TREATMENT/DISPOSAL SYSTEM, INCLUDING BUT NOT LIMITED TO THE POSSIBILITY OF RECURRING OPERATION AND MAINTENANCE DIFFICULTIES THAT WOULD LEAD TO INCREASED DEGRADATION.

The answer to this question is the same as that for Item # 4.f) in the Preferred Design Alternative.

4.g) DESCRIBE ANY IMPACTS TO HUMAN HEALTH AND THE OVERALL QUALITY AND VALUE OF THE WATER RESOURCE.

The commentary here is the same as that for the Preferred Design Alternative except that the underground mine employees might be exposed to very small amounts of bacteria because of the sewage effluent being used to service the underground dust control system on the mine machinery.

Some of the treated effluent could also be transported out of the mine on the coal. The resource will be removed to the shipping site on conveyor belts. This could further expose mine employees to the liquid.

4.h) DESCRIBE AND PROVIDE AN ESTIMATE OF THE IMPORTANT SOCIAL AND ECONOMIC BENEFITS TO BE REALIZED THROUGH THIS PROPOSED PROJECT. INCLUDE THE NUMBER AND TYPES OF JOBS CREATED AND THE TAX REVENUES GENERATED.

The commentary here is identical to that under Item # 4.h) on Page 4 of this document.

AEC 02960

4.i) DESCRIBE ENVIRONMENTAL BENEFITS TO BE REALIZED THROUGH THIS PROPOSED PROJECT.

The commentary here is identical to that under Item #4.i) on Page 5 of this document.

4.j) DESCRIBE AND PROVIDE AN ESTIMATE OF THE SOCIAL AND ECONOMIC BENEFITS THAT MAY BE LOST AS A RESULT OF THIS PROJECT. INCLUDE THE IMPACTS ON COMMERCIAL AND RECREATIONAL USE OF THE WATER RESOURCE.

There would be no loss of social or economic benefit if this alternative were adopted. There would be no impacts to streams or other water bodies other than to the process water pond. All sewage effluent will be routed through the pond to the dust control system on the underground mining machinery.

4.k) DESCRIBE THE ENVIRONMENTAL BENEFITS LOST AS A RESULT OF THIS PROJECT. INCLUDE THE IMPACT ON AQUATIC LIFE, WILDLIFE THREATENED OR ENDANGERED SPECIES.

There would be no impacts on aquatic life or wildlife. No discharge to waters of the state would occur. Comments on threatened and endangered species were set forth in earlier sections of this document.

4.l) A DESCRIPTION OF ANY CONSTRUCTION WORK, FILL OR OTHER STRUCTURES TO OCCUR OR BE PLACED IN OR NEAR A STREAM BED.

There would be no construction work, fill or other structures placed in streams under this alternative.

4.m) PROVIDE ANY OTHER INFORMATION THAT MAY BE USEFUL IN EVALUATING THIS APPLICATION.

AEC 02961

ATTACHMENT #1
TO OHIO ENVIRONMENTAL PROTECTION AGENCY
ANTI DEGRADATION ADDENDUM
CENTURY MINING COMPANY SEWAGE TREATMENT FACILITY
BELMONT COUNTY, OHIO

NON DEGRADATION ALTERNATIVE:

INTRODUCTION:

The commentary here is the same as that under the INTRODUCTION Section on Page #1.

ANSWERS TO SPECIFIC QUESTIONS ON THE APPLICATION:

4.a) DESCRIBE THE AVAILABILITY, COST EFFECTIVENESS AND TECHNICAL FEASIBILITY OF CONNECTING TO EXISTING CENTRAL OR REGIONAL SEWAGE COLLECTION AND TREATMENT FACILITIES, INCLUDING LONG RANGE PLANS FOR SEWER SERVICE OUTLINED IN STATE OR LOCAL WATER QUALITY MANAGEMENT PLANNING DOCUMENTS AND APPLICABLE FACILITY PLANNING DOCUMENTS.

The commentary here is the same as that under Section 4.a) in the Preferred Design Alternative.

4.b) LIST AND DESCRIBE ALL GOVERNMENT AND/OR PRIVATELY SPONSORED CONSERVATION PROJECTS THAT MAY HAVE BEEN OR WILL BE SPECIFICALLY TARGETED TO IMPROVE WATER QUALITY OR ENHANCE RECREATIONAL OPPORTUNITIES IN THE AFFECTED WATER RESOURCE.

The commentary here is the same as that under Section 4.b) in the Preferred Design Alternative.

4.c) PROVIDE A BRIEF DESCRIPTION OF THE NON DEGRADATION DESIGN TREATMENT/DISPOSAL ALTERNATIVE INCLUDING OPERATIONAL AND MAINTENANCE NEEDS.

Two concepts were investigated for this alternative. The first was an agricultural spray-back system. The second was a treatment wetland system.

AEC 02962

4.d) OUTLINE OF THE TREATMENT/DISPOSAL SYSTEM EVALUATED, INCLUDING THE COSTS ASSOCIATED WITH THE EQUIPMENT, INSTALLATION AND CONTINUED OPERATION AND MAINTENANCE.

If the spray-back system could be installed on nearby land, the cost of installation would increase by approximately 50% over the cost of installing the preferred design alternative. Cost of maintenance would also increase and reliability would decrease.

If the wetland system were used, the cost of installation would be approximately the same as that to install the treatment plant. However, costs of monitoring, maintenance and record-keeping would be extraordinary.

The following additional items were part of the investigation:

1.) The mining company does not own adequate land in close proximity to the surface facilities to economically conduct either activity.

2.) Owners of neighboring farms are not interested in having treated or untreated sewer water placed upon their land.

3.) If either system were installed on land isolated from the surface facility site, then maintenance and record keeping costs would increase proportionately.

4.) If arrangements for a suitable off-site location could be made, the overall cost of installation and maintenance of either of these systems appears to be excessive compared with the system proposed.

6.) The mining company is not interested in the environmental opposition and resultant negative public relations which could result if either of these sewage disposal options were proposed.

4.e) IDENTIFY THE SUBSTANCES TO BE DISCHARGED, INCLUDING THE AMOUNT OF REGULATED POLLUTANTS TO BE DISCHARGED IN TERMS OF MASS AND CONCENTRATION

Substances to be discharged would be as set forth in the table on Page 3 of this document.

4.f) DESCRIBE THE RELIABILITY OF THE TREATMENT/DISPOSAL SYSTEM, INCLUDING BUT NOT LIMITED TO THE POSSIBILITY OF RECURRING OPERATION AND MAINTENANCE DIFFICULTIES THAT WOULD LEAD TO INCREASED DEGRADATION.

Reliability of either system is not known while there is considerable experience with the proposed preferred treatment facility.

AEC 02963

There are more parts to be maintained in the spray back system. Additional pumping systems, piping and spray heads would have to be monitored and maintained. This would also contribute to much higher costs of operation.

Treatment wetlands are apparently demanding in terms of monitoring, maintenance and record keeping. They are a specialized sewage treatment system which should be operated under the full-time supervision or observation of a sewage specialist. This would be an addition, full time cost to the operator.

4.g) DESCRIBE ANY IMPACTS TO HUMAN HEALTH AND THE OVERALL QUALITY AND VALUE OF THE WATER RESOURCE.

No water resource would be affected by this alternative. Impacts on human health would not be an issue as long as the treatment facility functioned correctly. For exceptions to this statement, see commentary under this paragraph in previous sections.

4.h) DESCRIBE AND PROVIDE AN ESTIMATE OF THE IMPORTANT SOCIAL AND ECONOMIC BENEFITS TO BE REALIZED THROUGH THIS PROPOSED PROJECT. INCLUDE THE NUMBER AND TYPES OF JOBS CREATED AND THE TAX REVENUES GENERATED.

The response to this question is the same as that in the Preferred Design Alternative on Page 4 of this document.

4.i) DESCRIBE ENVIRONMENTAL BENEFITS TO BE REALIZED THROUGH THIS PROPOSED PROJECT.

The response to his question is the same as that in the Preferred Design Alternative on Page 5 of this document.

4.j) DESCRIBE AND PROVIDE AN ESTIMATE OF THE SOCIAL AND ECONOMIC BENEFITS THAT MAY BE LOST AS A RESULT OF THIS PROJECT. INCLUDE THE IMPACTS ON COMMERCIAL AND RECREATIONAL USE OF THE WATER RESOURCE.

The non degradation alternative, by definition does not permit impacts to streams or other natural water bodies. The social and economic benefits lost if this project is not permitted would far outweigh those lost if the project proceeds.

4.k) DESCRIBE THE ENVIRONMENTAL BENEFITS LOST AS A RESULT OF THIS PROJECT. INCLUDE THE IMPACT ON AQUATIC LIFE, WILDLIFE THREATENED OR ENDANGERED SPECIES.

The response to this question is the same as that in the Preferred Design Alternative on Page 5 of this document.

AEC 02964

4.l) A DESCRIPTION OF ANY CONSTRUCTION WORK, FILL OR OTHER STRUCTURES TO OCCUR OR BE PLACED IN OR NEAR A STREAM BED.

There would be no work done or facilities installed in any stream in this alternative.

4.m) PROVIDE ANY OTHER INFORMATION THAT MAY BE USEFUL IN EVALUATING THIS APPLICATION.

AEC 02965

ATTACHMENT #1
TO OHIO ENVIRONMENTAL PROTECTION AGENCY
ANTIDEGRADATION ADDENDUM
CENTURY MINING COMPANY SEWAGE TREATMENT FACILITY
BELMONT COUNTY, OHIO

PREFERRED DESIGN ALTERNATIVE:

INTRODUCTION:

This sewage treatment installation has been designed to service a bathhouse and office complex for an underground mining operation.

This document addresses the requirements of Section C of the Ohio Environmental Protection Agency Antidegradation Addendum. The PREFERRED DESIGN ALTERNATIVE is addressed on Pages 1 thru 6. The NON DEGRADATION ALTERNATIVE is addressed on Pages 7 thru 10 and the MINIMAL DEGRADATION ALTERNATIVE is addressed on Pages 11 thru 13. The mitigative techniques to be incorporated during mining are described in detail in The MITIGATION PLAN included as ATTACHMENT #1 to this ADDENDUM.

ANSWERS TO SPECIFIC QUESTIONS ON THE APPLICATION:

4.a) DESCRIBE THE AVAILABILITY, COST EFFECTIVENESS AND TECHNICAL FEASIBILITY OF CONNECTING TO EXISTING CENTRAL OR REGIONAL SEWAGE COLLECTION AND TREATMENT FACILITIES INCLUDING LONG RANGE PLANS FOR SEWER SERVICE OUTLINED IN STATE OR LOCAL WATER QUALITY MANAGEMENT PLANNING DOCUMENTS AND APPLICABLE FACILITY PLANNING DOCUMENTS.

There are no central or regional sewers which are physically or economically available to the operation. The nearest sewage treatment plants to the site are at Barnesville or the Ohio Valley Mall. These sites are both several miles away. This information was obtained from the Belmont County Sanitary Sewer District on October 23, 2001.

Costs to run pipe and pump the distances involved would be prohibitive. The time required to complete this work including coordination with government agencies, permitting and construction, would not fit the necessary schedule of beginning operations.

AEC 02966

4.b) LIST AND DESCRIBE ALL GOVERNMENT AND/OR PRIVATELY SPONSORED CONSERVATION PROJECTS THAT MAY HAVE BEEN OR WILL BE SPECIFICALLY TARGETED TO IMPROVE WATER QUALITY OR ENHANCE RECREATIONAL OPPORTUNITIES ON THE AFFECTED WATER RESOURCE.

Inquiries were made of the county engineer, the county natural resources conservation service and the state department of natural resources to determine if any projects were planned or underway. There are none.

4.c) PROVIDE A BRIEF DESCRIPTION OF THE PREFERRED DESIGN TREATMENT/DISPOSAL ALTERNATIVE INCLUDING OPERATIONAL AND MAINTENANCE NEEDS.

This alternative would discharge treated sanitary water directly to Piney Creek. The discharge point would be approximately 2 ½ miles upstream of Captina Creek. The water would be run through a commercially produced treatment plant which includes primary treatment, sand filtration, chlorination and dechlorination prior to being discharged to the stream. The system also incorporates a backwater valve at the outlet and a bypass system to allow the effluent to be handled in a non-polluting manner in case of a plant failure.

The technology involved is state of the art sewage treatment. The discharge water quality is generally reliable when the equipment is properly maintained. Regular equipment observation and maintenance schedules will be followed so that proper maintenance will be assured.

4.d) OUTLINE OF THE TREATMENT/DISPOSAL SYSTEM EVALUATED, INCLUDING THE COSTS ASSOCIATED WITH THE EQUIPMENT, INSTALLATION AND CONTINUED OPERATION AND MAINTENANCE

The system conceived for this preferred design alternative consists of the following components:

> Gravity sewer pipes, a valve pit, a pump station and force main to move the raw sewage from the bathhouse to the treatment plant where it will be treated to meet applicable standards before being released to the receiving stream. There will be a backwater gate at the outlet to prevent flow of flood waters from the creek into the sewage handling system. There will be a bypass system to allow handling of the effluent in case of a plant failure or shut down.

The treatment plant is a package plant and will consist of a trash trap, a flow equalization tank, two aeration tanks, a clarifier, a sludge tank, a dosing tank, sand filters and a chlorine contact tank. A backwater valve will be installed at the outlet end of the discharge pipe to prevent flow of flood water into the system. This alternative will also have a bypass valve near the outlet end of the system. This valve will allow discharge to be loaded and hauled rather than being discharged to the receiving stream in case of a system breakdown.

AEC 02967

Automatic controls will be included in the system to insure that performance will be as described. The treated water will meet requirements of all applicable permits.
Equipment and installation cost is projected to be $146,000.00 (One Hundred Forty Six Thousand Dollars). Operating and maintenance costs will range between $1,300.00 (One Thousand Three Hundred Dollars) and $4,000.00 (Four Thousand Dollars) annually.

4.e) IDENTIFY THE SUBSTANCES TO BE DISCHARGED, INCLUDING THE AMOUNT OF REGULATED POLLUTANTS TO BE DISCHARGED IN TERMS OF MASS AND CONCENTRATION.

Approximately 10,000 gallons per day of water will be treated. The substances to be discharged will be within the limitations shown in the following table:

PARAMETER	*SUMMER (mg/l)*	*WINTER (mg/l)*
$cBOD_5$	10	10
T.S.S.	12	12
Dissolved Oxygen	Greater than 6.0 at all times	
Ammonia	1.0	3.0
Chlorine Residual	0.019	
pH	6.5 - 9.0	
Fecal Coliform	1,000 (#/100 ml)	--

4.f) DESCRIBE THE RELIABILITY OF THE TREATMENT/DISPOSAL SYSTEM, INCLUDING BUT NOT LIMITED TO THE POSSIBILITY OF RECURRING OPERATION AND MAINTENANCE DIFFICULTIES THAT WOULD LEAD TO INCREASED DEGRADATION.

The proposed system is very reliable. No major maintenance is anticipated for at least one year after installation. During and following that period, normal maintenance and operating procedures should prevent breakdowns which could result in possible pollution of the receiving waters.

In the unlikely event of a failure or breakdown, an emergency bypass valve will be provided at the end of the discharge line. This valve will be closed and the plant shut down until haulage can be arranged at which time the effluent will be hauled to a public treatment facility.

AEC 02968

4.g) DESCRIBE ANY IMPACTS TO HUMAN HEALTH AND THE OVERALL QUALITY AND VALUE OF THE WATER RESOURCE.

No adverse impacts to human health are anticipated. Sewage water will be treated to meet requirements of the Ohio Environmental Protection Agency Permit to Install before being released to the receiving stream. In case of a plant breakdown, the sewage will be hauled to a public treatment facility as previously described.

The point source discharge into Piney Creek will cause a minimal degradation of that stream. Dilution of the effluent will assure that impacts on the receiving stream will be minimal. Our hydrology records indicate that the average daily flow in the stream is 7,000,000 GPD. The 10,000 gallon per day effluent from the treatment plant will have a negligible impact on the stream. The bypass system described elsewhere will allow disposal of the effluent before it reaches the stream in case of an unexpected plant failure or shutdown.

4.h) DESCRIBE AND PROVIDE AN ESTIMATE OF THE IMPORTANT SOCIAL AND ECONOMIC BENEFITS TO BE REALIZED THROUGH THIS PROPOSED PROJECT. INCLUDE THE NUMBER AND TYPES OF JOBS CREATED AND THE TAX REVENUES GENERATED.

Introduction:

Coal provides the most efficient and economical method of generating electrical energy and will continue to provide this service for a number of years in the future. More than half the electrical energy consumed presently in the United States is generated by coal burning facilities. Over 80% of that consumed in the State of Ohio is produced by coal fired power plants.

Wind, solar and hydro power generation methods are not capable of meeting demand at this time. Nuclear energy represents too large a potential for long term environmental impact and life safety. The natural gas supply and distribution systems are not sufficient to meet the demands of the electrical generating industry.

There have been recent indications that a shortage of electrical power is developing. Several reasons for this shortage have been set forth; however, the significant facts are: The demand for electricity has increased by over 100% since 1970. There has been a disproportionately small increase in generating capacity during that time. Furthermore, demand for electrical energy is projected to increase by another 30% to 40% between now and the year 2020.

Project Specifics:

Belmont County, the location of this mining operation, is one of 23 counties in the state which are categorized as distressed, situationally distressed or labor surplus areas by the most recent data available from the State of Ohio Department of Development, Office of Strategic Research.

AEC 02969

Should the employment opportunity not be permitted to develop then the loss to the local economy would be significant. Belmont County is categorized as a distressed county by the Ohio Department of Development, Office of Strategic Research. This means that unemployment is 125% or greater of the most recent U.S. 5 year average unemployment rate; per capita income is at or below 80% of the U.S. per capita income; and 20% or more of the population lives below the poverty level.

This mining operation will support the direct employment of 333 people during the life of the operation which is estimated to be 30 years. During this time, $17,500,000.00 (Seventeen Million, Five Hundred Thousand Dollars) will be paid in annual payrolls. $7,300,000.00 (Seven Million, Three Hundred Thousand Dollars) will be paid annually in taxes and.$5,000,000.00 (Five Million Dollars) will be paid in royalties. Additionally, $33,000,000.00 (Thirty three Million Dollars) will be spent for supplies and nearly $5,000,000.00 (Five million Dollars) will be paid in insurances.

It has been statistically proven that every mining job supports between four and ten jobs in related industries or services. These related industries and services include: utility supply, transportation, material and fuel supply, and other activities which directly or indirectly support the mining operation. They may also include domestic services such as lawn and garden employees, and day care and baby sitting services employed by the mining personnel and their families.

There will be other benefits from this operation which will trickle down into the local economy. General merchants will undoubtably experience sales from the mine employees which they would not experience if the group were unemployed, were employed in other geographic locations, or were employed in lesser paying jobs.

4.i) DESCRIBE ENVIRONMENTAL BENEFITS TO BE REALIZED THROUGH THIS PROPOSED PROJECT.

This project will provide sanitary service, including shower facilities, to 333 people employed by the mining company. Installation of the project will keep raw sewage from being discharged directly into Piney Creek .

4.j) DESCRIBE AND PROVIDE AN ESTIMATE OF THE SOCIAL AND ECONOMIC BENEFITS THAT MAY BE LOST AS A RESULT OF THIS PROJECT. INCLUDE THE IMPACTS ON COMMERCIAL AND RECREATIONAL USE OF THE WATER RESOURCE.

There should be no loss of social or economic benefits from this mining operation. The employment provided will improve long term economic conditions. Much larger economic losses would result if the project was not undertaken. (See Item #4.h) of this document.

AEC 02970

Sewage will be retained and treated as previously discussed. Water quality will be lowered within limits set forth in the TABLE which is part of Item # 4.e) of this design alternative. This water quality would be applicable at the outlet of the plant. Discharged water would be further diluted by the flow in Piney Creek. The area is generally isolated from any tourist or other public attraction.

4.k) DESCRIBE THE ENVIRONMENTAL BENEFITS LOST AS A RESULT OF THIS PROJECT. INCLUDE THE IMPACT ON AQUATIC LIFE, WILDLIFE THREATENED OR ENDANGERED SPECIES.

Water quality will be affected to the extent allowed as previously discussed. Assuming that the limitations set by the P.T.I. are non-detrimental to aquatic life, Impacts to aquatic life and wildlife should be unchanged during mine operations.

According to the Ohio Department of Natural Resources, Division of Natural Areas and Preserves, there are no threatened or endangered species and no regionally significant breeding or non-breeding waterfowl, neotropical song birds or shore bird concentration areas on the site. The confirmation letter from DNAP is included as an Attachment to this document.

4.l) A DESCRIPTION OF ANY CONSTRUCTION WORK, FILL OR OTHER STRUCTURES TO OCCUR OR BE PLACED IN OR NEAR A STREAM BED.

No direct impacts will occur below the normal pool level of the stream. Fill was placed to elevate the new plant above the 100 year flood level; however, no fill was placed below the ordinary high water mark of the stream. The sewage outlet pipe will be located above the normal pool level of the stream. It will contain a tail wall and a backwater valve as previously described. Stone riprap will be placed between the plant discharge pipe outlet and the waterline. This riprap will extend below the ordinary high water line of the stream and will be the only impact on the stream bed.

4.m) PROVIDE ANY OTHER INFORMATION THAT MAY BE USEFUL IN EVALUATING THIS APPLICATION.

Ohio EPA

DIVISION OF SURFACE WATER

Antidegration Addendum

In accordance with Ohio Administrative Code 3745-1-05, additional information may be required to complete your application for a permit to install or NPDES permit. For any application for which there might be an increase in the level of pollutants being discharged (NPDES and/or PTI) or for which there might be some activity taking place within a stream bed, the processing of the permit may have to go through various procedures as outlined in the above stated rule. The rule outlines various procedures for public participation as well as procedures pertaining to the levels of review necessary. The levels of review necessary depend on the degradation being considered/requested. The rule also outlines various exclusions from portions of the application and review requirements and waivers that the Director may grant as questions. The answers provided will allow the Ohio EPA to determine if additional information is needed. **All projects that require both an NPDES and PTI should submit both applications simultaneously to avoid going through the antidegradation process separately for each permit.**

A. **Applicant:** American Energy Corporation

Facility Owner: American Energy Corporation

Facility Location (city and county): Beallsville, Belmont County

Application or Plans Prepared By: Jack A. Hamilton & Associates, Inc.

Project Name: Sewage Treatment Plant Point Source Discharge

NPDES Permit Number (if applicable): OIL00091*ED OH0059552

B. **Antidegradation Applicability**

Is the application for? (check as many as apply):

____ Application with no direct surface water discharge (Projects that do not meet the applicability section of 3745-1-05(H) 1, i.e.. On site disposal, extensions of sanitary sewers spray irrigation, indirect discharger to POTW, etc.). (Complete Section E)

____ Renewal NPDES application or PTI application with no requested increase in loading of currently permitted pollutants (Complete Section E. Do not complete Sections C or D).

____ PTI and NPDES application for a new wastewater treatment works that will discharge to a surface water. (Complete Sections C and E)

____ An expansion/modification of an existing wastewater treatment works discharging to a surface water that will result in any of the following (PTI and NPDES): (Complete Section C and E)

- ☐ addition of any pollutant not currently in the discharge, or
- ☐ an increase in mass or concentration of any pollutant currently in the discharge, or
- ☐ an increase in any current pollutant limitation in terms of mass or concentration.

✓ PTI that involves placement of fill or installation of any portion of a sewerage system (i.e., sanitary sewers, pump stations, WWTP, etc.)within 300 feet of a stream bed. Please provide information on an attached sheet (i.e., number of stream crossings, fill placement, etc.) and complete section E.

_____ Initial NPDES permit for an existing treatment works with a wastewater discharge. (Complete Sections C, D and E)

_____ Renewal NPDES permit or modification to an effective NPDES permit that will result in any of the following: (Complete Section C and E)

- ☐ a new permit limitation for a pollutant that previously had no limitation, or
- ☐ an increase in any mass or concentration limitation of any pollutant that currently has a limitation.

_____ Other projects with no direct surface water discharge (i.e., on site disposal, extensions of sanitary sewers, spray irrigation, indirect discharger to POTW, etc.). (Complete Section E)

C. Antidegradation Information

1. Does the PTI and/or NPDES permit application meet an exclusion as outlined by OAC 3745-1-05(D)(1) of the Antidegradation rule?

   _____ Yes (Complete Question C.2)

   ✓ No (Complete Questions C.3 and C.4)

2. For projects that would be eligible for exclusions provide the following information.

   a. Provide justification for the exclusion.

   b. Identify the substances to be discharged, including the amount of regulated pollutants to be discharged in terms of mass and concentration.

   c. A description of any construction work, fill or other structures to occur or be placed in or near a stream bed.

3. Are your requesting a waiver as outlined by OAC 3745-1-05(D)(2-7) of the Antidegradation rule?

   ✓ No

   _____ Yes

   If you wish to pursue one of the waivers, please identify the waiver and submit the necessary information to support the request. Depending on the waiver requested, the information required under question C.4 is still required to complete the application.

4. For all projects that do <u>not</u> qualify for an exclusion a report must be submitted evaluating the preferred design alternative, non-degradation alternatives, minimal degradation alternatives, and mitigative techniques/measures for the design and operation of the activity. The information outlined below should be addressed in this report. If a waiver is requested, this section is still required.
   SEE ATTACHMENT #1

a. Describe the availability, cost effectiveness and technical feasibility of connecting to existing central or regional sewage collection and treatment facilities, including long range plans for sewer service outlined in state or local water quality management planning documents and applicable facility planning documents.

b. List and describe all government and/or privately sponsored conservation projects that may have been or will be specifically targeted to improve water quality or enhance recreational opportunities on the effected water resource.

c. Proved a brief description below of all treatment/disposal alternatives evaluated for this application. (If additional space is needed please attach to the end of this addendum).

Preferred design alternative: See Attachment #1

Non-degradation alternative (s): See Attachment #1

Minimal degradation alternative (s): See Attachment #1

Mitigative technique/measure (s): See Attachment #1

At a minimum, the following information must be included in the report for each alternative evaluated. See Attachment #1

d. Outline of the treatment/disposal system evaluated, including the costs associated with the equipment, installation, and continued operation and maintenance.

e. Identify the substances to be discharged, including the amount of regulated pollutants to be discharged in terms of mass and concentration.

f. Describe the reliability of the treatment/disposal system, including but not limited to the possibility of recurring operation and maintenance difficulties that would lead to increased degradation.

g. Describe any impacts to human health and the overall quality and value of the water resource.

h. Describe and provide an estimate of the important social and economic benefits to be realized through this proposed project. Include the number and types of jobs created and tax revenues generated.

i. Describe environmental benefits to be realized through this proposed degradation.

j. Describe and provide an estimate of the social and economic benefits that may be lost as a result of this project. Include the impacts on commercial and recreational use of the water resource.

k. Describe the environmental benefits lost as a result of this project. Include the impact on the aquatic life, wildlife, threatened or endangered species.

l. A description of any construction work, fill or other structures to occur or be placed in or near a stream bed.

m. Provide any other information that may be useful in evaluating this application.

D. Discharge Information

1. For treatment/disposal systems constructed pursuant to a previously issued Ohio EPA PTI, provide the following information:

PTI Number	06 -6555	
PTI Issuance Date	11-09-01	For sewage treatment plant
Initial Date of Discharge	NIA	

2. Has the appropriate NPDES permit application form been submitted including representative effluent data?

✓ Yes (go to E) The appropriation NPDES modification form is being submitted. There is no existing effluent data, sanitary facility is proposed.

_____ No (see below)

If no, submit the information as applicable under a OR b as follows:

a. For entities discharging process wastewater attach a completed 2C form.

b. For entities discharging wastewater of domestic origin attach the results of at least one chemical analysis of the wastestream for all pollutants for which authorization to discharge is being requested and a measurement of the daily volume (gallons per day) of wastewaters being discharge.

E. Base on my inquiry of the person or persons who mange the system or those persons directly responsible for gathering the information, the information is, to the best of my knowledge and belief, true, accurate and complete.

This section must be signed by the same responsible person who signed the accompanying permit application or certification as per 40 CFR 122.22.

Signature _____

Date 1/2/02

disk/Antiform
6/24/98

ATTACHMENT #1
TO OHIO ENVIRONMENTAL PROTECTION AGENCY
ANTI DEGRADATION ADDENDUM
CENTURY MINING COMPANY SEWAGE TREATMENT FACILITY
BELMONT COUNTY, OHIO

NON- DEGRADATION ALTERNATIVE:

INTRODUCTION:

The commentary here is the same as that under the INTRODUCTION Section on Page #1.

ANSWERS TO SPECIFIC QUESTIONS ON THE APPLICATION:

4.a) DESCRIBE THE AVAILABILITY, COST EFFECTIVENESS AND TECHNICAL FEASIBILITY OF CONNECTING TO EXISTING CENTRAL OR REGIONAL SEWAGE COLLECTION AND TREATMENT FACILITIES, INCLUDING LONG RANGE PLANS FOR SEWER SERVICE OUTLINED IN STATE OR LOCAL WATER QUALITY MANAGEMENT PLANNING DOCUMENTS AND APPLICABLE FACILITY PLANNING DOCUMENTS.

N/A

4.b) LIST AND DESCRIBE ALL GOVERNMENT AND/OR PRIVATELY SPONSORED CONSERVATION PROJECTS THAT MAY HAVE BEEN OR WILL BE SPECIFICALLY TARGETED TO IMPROVE WATER QUALITY OR ENHANCE RECREATIONAL OPPORTUNITIES IN THE AFFECTED WATER RESOURCE.

The commentary here is the same as that under Section 4.b) in the Preferred Design Alternative.

4.c) PROVIDE A BRIEF DESCRIPTION OF THE NON DEGRADATION DESIGN TREATMENT/DISPOSAL ALTERNATIVE INCLUDING OPERATIONAL AND MAINTENANCE NEEDS.

Mine water may have been pumped to another existing pond at the facility, currently covered under the N.P.D.E.S. permit.

4.d) OUTLINE OF THE TREATMENT/DISPOSAL SYSTEM EVALUATED, INCLUDING THE COSTS ASSOCIATED WITH THE EQUIPMENT, INSTALLATION AND CONTINUED OPERATION AND MAINTENANCE.

If mine water was pumped to one the existing ponds, installation of the required piping would would increase the water handling procedure by approximately 90% over the cost of minimal

AEC 02976

upgrading of Pond 002 as outlined in the preferred design alternative. Cost of maintenance would also increase.

4.e) IDENTIFY THE SUBSTANCES TO BE DISCHARGED, INCLUDING THE AMOUNT OF REGULATED POLLUTANTS TO BE DISCHARGED IN TERMS OF MASS AND CONCENTRATION

Substances to be discharged would be as set forth in the table on Page 2 of this document.

4.f) DESCRIBE THE RELIABILITY OF THE TREATMENT/DISPOSAL SYSTEM, INCLUDING BUT NOT LIMITED TO THE POSSIBILITY OF RECURRING OPERATION AND MAINTENANCE DIFFICULTIES THAT WOULD LEAD TO INCREASED DEGRADATION.

Reliability of existing ponds is documented through years of monitoring, however, treatment of the mine water which discharged from Pond 002 has not required treatment is the past, as ponds 008 and 011 have not required treatment in the past.

4.g) DESCRIBE ANY IMPACTS TO HUMAN HEALTH AND THE OVERALL QUALITY AND VALUE OF THE WATER RESOURCE.

No water resource would be affected by this alternative. Impacts on human health would not be an issue as long as Pond 002 functions correctly. For exceptions to this statement, see commentary under this paragraph in previous sections.

4.h) DESCRIBE AND PROVIDE AN ESTIMATE OF THE IMPORTANT SOCIAL AND ECONOMIC BENEFITS TO BE REALIZED THROUGH THIS PROPOSED PROJECT. INCLUDE THE NUMBER AND TYPES OF JOBS CREATED AND THE TAX REVENUES GENERATED.

The response to this question is the same as that in the Preferred Design Alternative on Page 3 of this document.

4.i) DESCRIBE ENVIRONMENTAL BENEFITS TO BE REALIZED THROUGH THIS PROPOSED PROJECT.

The response to his question is the same as that in the Preferred Design Alternative on Page 4 of this document.

4.j) DESCRIBE AND PROVIDE AN ESTIMATE OF THE SOCIAL AND ECONOMIC BENEFITS THAT MAY BE LOST AS A RESULT OF THIS PROJECT. INCLUDE THE IMPACTS ON COMMERCIAL AND RECREATIONAL USE OF THE WATER RESOURCE.

The non-degradation alternative, by definition does not permit impacts to streams or other

AEC 02977

natural water bodies. The social and economic benefits lost if this project is not permitted would far outweigh those lost if the project proceeds.

4.k) DESCRIBE THE ENVIRONMENTAL BENEFITS LOST AS A RESULT OF THIS PROJECT. INCLUDE THE IMPACT ON AQUATIC LIFE, WILDLIFE THREATENED OR ENDANGERED SPECIES.

The response to this question is the same as that in the Preferred Design Alternative on Page 5 of this document.

4.l) A DESCRIPTION OF ANY CONSTRUCTION WORK, FILL OR OTHER STRUCTURES TO OCCUR OR BE PLACED IN OR NEAR A STREAM BED.

There would be no work done or facilities installed in any stream with this alternative.

4.m) PROVIDE ANY OTHER INFORMATION THAT MAY BE USEFUL IN EVALUATING THIS APPLICATION.

AEC 02978

ATTACHMENT #1
TO OHIO ENVIRONMENTAL PROTECTION AGENCY
ANTI DEGRADATION ADDENDUM
CENTURY MINING COMPANY SEWAGE TREATMENT FACILITY
BELMONT COUNTY, OHIO

MINIMAL DEGRADATION ALTERNATIVE:

INTRODUCTION:

This commentary is identical to that in the INTRODUCTION on PAGE 1 of this document.

ANSWERS TO SPECIFIC QUESTIONS ON THE APPLICATION:

4.a) DESCRIBE THE AVAILABILITY, COST EFFECTIVENESS AND TECHNICAL FEASIBILITY OF CONNECTING TO EXISTING CENTRAL OR REGIONAL SEWAGE COLLECTION AND TREATMENT FACILITIES, INCLUDING LONG RANGE PLANS FOR SEWER SERVICE OUTLINED IN STATE OR LOCAL WATER QUALITY MANAGEMENT PLANNING DOCUMENTS AND APPLICABLE FACILITY PLANNING DOCUMENTS.

N/A

4.b) LIST AND DESCRIBE ALL GOVERNMENT AND/OR PRIVATELY SPONSORED CONSERVATION PROJECTS THAT MAY HAVE BEEN OR WILL BE SPECIFICALLY TARGETED TO IMPROVE WATER QUALITY OR ENHANCE RECREATIONAL OPPORTUNITIES IN THE AFFECTED WATER RESOURCE.

The commentary here is the same as that under Section 4.b) in the Preferred Design Alternative.

4.c) PROVIDE A BRIEF DESCRIPTION OF THE MINIMAL DEGRADATION TREATMENT/DISPOSAL ALTERNATIVE INCLUDING OPERATIONAL AND MAINTENANCE NEEDS.

This alternative would include recycling of all water back into the mine for dust control which would include installation of all associated piping to make this possible. There would be no discharge of water from Pond 002.

4.d) OUTLINE OF THE TREATMENT/DISPOSAL SYSTEM EVALUATED, INCLUDING THE COSTS ASSOCIATED WITH THE EQUIPMENT, INSTALLATION AND CONTINUED OPERATION AND MAINTENANCE

AEC 02979

The treatment system is identical with that described in the Preferred Design Alternative except that Pond 002 would discharge if heavy rainfall were to occur on the surface. and pumping from the mine was at its maximum amount.

4.e) IDENTIFY THE SUBSTANCES TO BE DISCHARGED, INCLUDING THE AMOUNT OF REGULATED POLLUTANTS TO BE DISCHARGED IN TERMS OF MASS AND CONCENTRATION

The response to this question is the same as for Item #4.e) in the other design alternatives.

4.f) DESCRIBE THE RELIABILITY OF THE TREATMENT/DISPOSAL SYSTEM, INCLUDING BUT NOT LIMITED TO THE POSSIBILITY OF RECURRING OPERATION AND MAINTENANCE DIFFICULTIES THAT WOULD LEAD TO INCREASED DEGRADATION.

The answer to this question is the same as that for Item # 4.f) in the Preferred Design Alternative.

4.g) DESCRIBE ANY IMPACTS TO HUMAN HEALTH AND THE OVERALL QUALITY AND VALUE OF THE WATER RESOURCE.

The commentary here is the same as that for the Preferred Design Alternative.

4.h) DESCRIBE AND PROVIDE AN ESTIMATE OF THE IMPORTANT SOCIAL AND ECONOMIC BENEFITS TO BE REALIZED THROUGH THIS PROPOSED PROJECT. INCLUDE THE NUMBER AND TYPES OF JOBS CREATED AND THE TAX REVENUES GENERATED.

The commentary here is identical to that under Item # 4.h) on Page 3 of this document.

4.i) DESCRIBE ENVIRONMENTAL BENEFITS TO BE REALIZED THROUGH THIS PROPOSED PROJECT.

The commentary here is identical to that under Item #4.i) on Page 4 of this document.

4.j) DESCRIBE AND PROVIDE AN ESTIMATE OF THE SOCIAL AND ECONOMIC BENEFITS THAT MAY BE LOST AS A RESULT OF THIS PROJECT. INCLUDE THE IMPACTS ON COMMERCIAL AND RECREATIONAL USE OF THE WATER RESOURCE.

There would be no loss of social or economic benefit if this alternative were adopted. Other than that of the mine operator, Pond 002 is to small to provide any commercial or recreational resource.

AEC 02980

4.k) DESCRIBE THE ENVIRONMENTAL BENEFITS LOST AS A RESULT OF THIS PROJECT. INCLUDE THE IMPACT ON AQUATIC LIFE, WILDLIFE THREATENED OR ENDANGERED SPECIES.

There would be no impacts on aquatic life or wildlife. No discharge to waters of the state would occur. Comments on threatened and endangered species were set forth in earlier sections of this document.

4.l) A DESCRIPTION OF ANY CONSTRUCTION WORK, FILL OR OTHER STRUCTURES TO OCCUR OR BE PLACED IN OR NEAR A STREAM BED.

There would be no construction work, fill or other structures placed in streams under this alternative, and none are proposed.

4.m) PROVIDE ANY OTHER INFORMATION THAT MAY BE USEFUL IN EVALUATING THIS APPLICATION.

AEC 02981

ATTACHMENT #1
TO OHIO ENVIRONMENTAL PROTECTION AGENCY
ANTIDEGRADATION ADDENDUM
CENTURY MINING COMPANY SEWAGE TREATMENT FACILITY
BELMONT COUNTY, OHIO

PREFERRED DESIGN ALTERNATIVE:

INTRODUCTION:

Pond 002 is an existing structure previously utilized for discharge of water from the underground mining operation. After several years during which time the mine was idle, Pond 002 monitoring was deleted from the N.P.D.E.S. permit, due to inactivity. The underground mine (Century Mine) has been reactivated, and Pond 002 needs to be utilized in its previous capacity. Pond 002 will be utilized for storage of water from the mine, and if necessary, treatment of discharge water to Piney Creek.

This document addresses the requirements of Section C of the Ohio Environmental Protection Agency Antidegradation Addendum. The PREFERRED DESIGN ALTERNATIVE is addressed on Pages 1 thru 5. The NON DEGRADATION ALTERNATIVE is addressed on Pages 6 thru 8, and the MINIMAL DEGRADATION ALTERNATIVE is addressed on Pages 9 thru 11. The mitigative techniques to be incorporated during mining are described in detail in The MITIGATION PLAN included as ATTACHMENT #1 to the site specific sewage treatment plant addendum.

ANSWERS TO SPECIFIC QUESTIONS ON THE APPLICATION:

4.a) DESCRIBE THE AVAILABILITY, COST EFFECTIVENESS AND TECHNICAL FEASIBILITY OF CONNECTING TO EXISTING CENTRAL OR REGIONAL SEWAGE COLLECTION AND TREATMENT FACILITIES INCLUDING LONG RANGE PLANS FOR SEWER SERVICE OUTLINED IN STATE OR LOCAL WATER QUALITY MANAGEMENT PLANNING DOCUMENTS AND APPLICABLE FACILITY PLANNING DOCUMENTS.

N/A

4.b) LIST AND DESCRIBE ALL GOVERNMENT AND/OR PRIVATELY SPONSORED CONSERVATION PROJECTS THAT MAY HAVE BEEN OR WILL BE SPECIFICALLY TARGETED TO IMPROVE WATER QUALITY OR ENHANCE RECREATIONAL OPPORTUNITIES ON THE AFFECTED WATER RESOURCE.

Inquiries were made of the county engineer, the county natural resources conservation service and the state department of natural resources to determine if any projects were planned or underway. There are none.

AEC 02982

4.c) PROVIDE A BRIEF DESCRIPTION OF THE PREFERRED DESIGN TREATMENT/DISPOSAL ALTERNATIVE INCLUDING OPERATIONAL AND MAINTENANCE NEEDS.

This alternative would discharge treated water directly to Piney Creek. The discharge point is currently approximately 2 ½ miles upstream of Captina Creek. The water will be treated, if necessary, in Pond 002, prior to discharge to Piney Creek.

4.d) OUTLINE OF THE TREATMENT/DISPOSAL SYSTEM EVALUATED, INCLUDING THE COSTS ASSOCIATED WITH THE EQUIPMENT, INSTALLATION AND CONTINUED OPERATION AND MAINTENANCE

The treatment system is existing. Minimal cost will be encountered to reactivate this structure. Operating and maintenance costs will range between $2,500.00 (Two Thousand Five Hundred Dollars) and $5,000.00 (Five Thousand Dollars) annually.

4.e) IDENTIFY THE SUBSTANCES TO BE DISCHARGED, INCLUDING THE AMOUNT OF REGULATED POLLUTANTS TO BE DISCHARGED IN TERMS OF MASS AND CONCENTRATION.

A maximum of approximately 66,000 gallons of water per day could possibly require treatment. The substances to be discharged will be within the limitations shown in the following table:

PARAMETER	*MASS*	*CONCENTRATION*
pH	6.5 to 9.0 S.U.	
T.S.S.	35.6 - 71.19 mg/l	35 - 70 mg/l
Iron, Total (Fe)	3051 - 7119 ug/l	3500 - 7000 ug/l
Manganese, Total (Mn)	2034 - 4068 ug/l	2000 - 4000 ug/l

4.f) DESCRIBE THE RELIABILITY OF THE TREATMENT/DISPOSAL SYSTEM, INCLUDING BUT NOT LIMITED TO THE POSSIBILITY OF RECURRING OPERATION AND MAINTENANCE DIFFICULTIES THAT WOULD LEAD TO INCREASED DEGRADATION.

The proposed system is very reliable. No major maintenance is anticipated. Normal maintenance and operating procedures should prevent problems which could result in possible pollution of the receiving waters.

AEC 02983

4.g) DESCRIBE ANY IMPACTS TO HUMAN HEALTH AND THE OVERALL QUALITY AND VALUE OF THE WATER RESOURCE.

No adverse impacts to human health are anticipated. Pond 002 will be treated to meet requirements of the Ohio Environmental Protection Agency N.P.D.E.S. Permit before being released to the receiving stream.

The point source discharge into Piney Creek will cause a minimal degradation of that stream. Dilution of the effluent will assure that impacts on the receiving stream will be minimal. Our hydrology records indicate that the average daily flow in the stream is 0 to 2,500 GPD. The 2,500 gallon per day effluent from the pond has not had a negligible impact on the stream.

4.h) DESCRIBE AND PROVIDE AN ESTIMATE OF THE IMPORTANT SOCIAL AND ECONOMIC BENEFITS TO BE REALIZED THROUGH THIS PROPOSED PROJECT. INCLUDE THE NUMBER AND TYPES OF JOBS CREATED AND THE TAX REVENUES GENERATED.

Introduction:

Coal provides the most efficient and economical method of generating electrical energy and will continue to provide this service for a number of years in the future. More than half the electrical energy consumed presently in the United States is generated by coal burning facilities. Over 80% of that consumed in the State of Ohio is produced by coal fired power plants.

Wind, solar and hydro power generation methods are not capable of meeting demand at this time. Nuclear energy represents too large a potential for long term environmental impact and life safety. The natural gas supply and distribution systems are not sufficient to meet the demands of the electrical generating industry.

There have been recent indications that a shortage of electrical power is developing. Several reasons for this shortage have been set forth; however, the significant facts are: The demand for electricity has increased by over 100% since 1970. There has been a disproportionately small increase in generating capacity during that time. Furthermore, demand for electrical energy is projected to increase by another 30% to 40% between now and the year 2020.

Project Specifics:

Belmont County, the location of this mining operation, is one of 23 counties in the state which are categorized as distressed, situationally distressed or labor surplus areas by the most recent data available from the State of Ohio Department of Development, Office of Strategic Research.

Should the employment opportunity not be permitted to develop, the loss to the local economy would be significant. Belmont County is categorized as a distressed county by the

Ohio Department of Development, Office of Strategic Research. This means that unemployment is 125% or greater of the most recent U.S. 5 year average unemployment rate; per capita income is at or below 80% of the U.S. per capita income; and 20% or more of the population lives below the poverty level.

This mining operation will support the direct employment of 333 people during the life of the operation which is estimated to be 30 years. During this time, $17,500,000.00 (Seventeen Million, Five Hundred Thousand Dollars) will be paid in annual payrolls. $7,300,000.00 (Seven Million, Three Hundred Thousand Dollars) will be paid annually in taxes and.$5,000,000.00 (Five Million Dollars) will be paid in royalties. Additionally, $33,000,000.00 (Thirty three Million Dollars) will be spent for supplies and nearly $5,000,000.00 (Five million Dollars) will be paid in insurances.

It has been statistically proven that every mining job supports between four and ten jobs in related industries or services. These related industries and services include: utility supply, transportation, material and fuel supply, and other activities which directly or indirectly support the mining operation. They may also include domestic services such as lawn and garden employees, and day care and baby sitting services employed by the mining personnel and their families.

There will be other benefits from this operation which will trickle down into the local economy. General merchants will undoubtably experience sales from the mine employees which they would not experience if the group were unemployed, were employed in other geographic locations, or were employed in lesser paying jobs.

4.i) DESCRIBE ENVIRONMENTAL BENEFITS TO BE REALIZED THROUGH THIS PROPOSED PROJECT.

Pond 002 is necessary to provide water storage for the mine. Approximately 333 people will be employed by the mining company. Treatment of mine water in Pond 002 will provide for treatment, if necessary, of mine water, prior to discharge to Piney Creek.

4.j) DESCRIBE AND PROVIDE AN ESTIMATE OF THE SOCIAL AND ECONOMIC BENEFITS THAT MAY BE LOST AS A RESULT OF THIS PROJECT. INCLUDE THE IMPACTS ON COMMERCIAL AND RECREATIONAL USE OF THE WATER RESOURCE.

There will be no loss of social or economic benefits from this mining operation. The employment provided will improve long term economic conditions. Much larger economic losses would result if the project was not undertaken. (See Item #4.h) of this document.

Pond 002 will be treated as previously discussed. The area is generally isolated from any tourist or other public attraction.

4.k) DESCRIBE THE ENVIRONMENTAL BENEFITS LOST AS A RESULT OF THIS PROJECT. INCLUDE THE IMPACT ON AQUATIC LIFE, WILDLIFE THREATENED OR ENDANGERED SPECIES.

Water quality will be affected to the extent allowed as previously discussed. Assuming that the limitations set by the N.P.D.E.S. permit are non-detrimental to aquatic life, impacts to aquatic life and wildlife should be unchanged during mine operations.

According to the Ohio Department of Natural Resources, Division of Natural Areas and Preserves, there are no threatened or endangered species and no regionally significant breeding or non-breeding waterfowl, neotropical song birds or shore bird concentration areas on the site. The confirmation letter from DNAP is included as an Attachment to the sanitary plant antidegradation addendum document.

4.l) A DESCRIPTION OF ANY CONSTRUCTION WORK, FILL OR OTHER STRUCTURES TO OCCUR OR BE PLACED IN OR NEAR A STREAM BED.

No construction work is proposed within or near a stream bed. Pond 002 is existing.

4.m) PROVIDE ANY OTHER INFORMATION THAT MAY BE USEFUL IN EVALUATING THIS APPLICATION.

AEC 02986

ANTIDEGRADATION

Public Notice of Receipt of Application

Information Verification and Signoff

District Contact: _____Abbot Stevenson_____ Date: __1/25/02____

Supervisor/A-D Coordinator: _____Bruce Goff_____ Date: _____

PTI App. No. : _____06-6766, 06-6778_____ NPDES No.: ___0IL00091*FD_____

Staff Verification of Complete/Accurate Public Notice Forms to CO	
☐ County(ies) on attached forms correct	☐ Correct receiving stream and network on attached forms
☐ Proposed average daily design flow on attached forms correct	☐ Verification that antidegradation applies
☐ Affected waterbody category on attached forms correct. If discharge affects SRW, 2nd page of form completed	☐ For existing discharger, supporting calculation attached that EEQ< Permit Limits
☐ Project location on attached forms correct	☐ Exclusion(s) requested do apply (get revised addendum if exclusion(s) does not apply)
☐ Facility address on attached forms correct	☐ Calc. and information confirming deminimus exclusion applies is attached (note different criteria for SRW). Also confirm for IMZM WQ Criteria.
☐ Addendum reviewed and it is accurate and complete.	☐ Eligibility for claimed waiver(s) confirmed
☐ Stream crossing issues. Documentation that anti. applies is attached.	☐ Complete/accurate copy of addendum with supporting attachments attached
☐ Sewer extension above CSO or SSO issues. Documentation that anti. applies is attached	☐ Checked to determine if public notice & public meeting/hearing coordination with another program or 401 is needed. If so, information is attached

AEC 02987

Date of Notice: _____ Belmont County

PUBLIC NOTICE
NOTICE OF RECEIPT OF APPLICATION
ANTIDEGRADATION

A. PTI AND NPDES

Public notice is hereby given that the Ohio Environmental Protection Agency (Ohio EPA)-Division of Surface Water (DSW) has received an application for the modification of a National Pollutant Discharge Elimination System (NPDES) permit for the discharge from the existing American Energy Corporation's Century Mine wastewater disposal system. Public notice is also given that Ohio EPA-DSW has received two applications for Permit to Install (PTI) for the construction of the proposed disposal systems. The NPDES and PTI applications were submitted by American Energy Corporation, 43521 Mayhugh Hill Road, Beallsville, OH 43716.

D. NO EXCLUSIONS

In PTI 06-6766, American Energy Corporation's preferred wastewater disposal alternative submitted for approval is proposed to treat a total of 190,000 gallons per day in six treatment ponds (outfalls 012-016) that will treat wastewaters associated with coal refuse disposal.

In PTI 06-6778, American Energy Corporation's preferred wastewater disposal alternative submitted for approval is proposed to treat a total of 66,000 gallons per day in one treatment pond (outfall 002) that will treat wastewaters pumped from the underground mine and runoff from the surrounding unaffected watershed.

The NPDES permit is being modified to include the 7 new outfalls included in the PTIs identified above, and to modify outfall 011 to include the discharge of sanitary wastewater from an existing package plant. The sanitary flow increase to outfall 011 is 10,000 gpd.

The disposal systems are proposed to be located at The Century Mine, in Section 3 of Wayne Township, Belmont County, Ohio. Treated wastewaters are proposed to be discharged at the same location. The proposed discharges at outfalls 002, 012-014, and 016 are to unnamed tributaries of Piney Fork and subsequently Captina Creek. The proposed discharge at outfall 015 is to an unnamed tributary of Captina Creek.

Other wastewater disposal alternatives resulting in lesser or no degradation or lowering of water quality will be considered by Ohio EPA.

F. SECOND PARAGRAPH

The discharges from this facility, if approved, would result in degradation to, or lowering of, the water quality of Piney Fork and subsequently, possibly Captina Creek. However, the

chemical-specific water quality criteria developed to protect aquatic life and human health, set forth in OAC 3745-1, will not be exceeded. In accordance with OAC 3745-1-05, an antidegradation review of the application will be conducted before deciding whether to allow a lowering of the water quality.

G. SELECT APPROPRIATE PARAGRAPH(S), then go to H:

_X___ The contents of the above stated application(s) indicate no exclusions or waivers, as outlined by section 3745-1-05 (D) of the antidegradation rule (effective as of October 1, 1996), apply or may be granted by the Director of Ohio EPA.

F. FINAL PARAGRAPHS

Copies of the pending NPDES and PTI applications are available for review at Ohio EPA's Southeast District Office, Logam, Ohio, (740) 385-8501.

Persons wishing to 1) be on Ohio EPA's interested parties mailing list for this project , or 2) submit comments for Ohio EPA's consideration in reviewing the application or 3) who wish to request a public hearing must submit such a request in writing to Ohio EPA's Division of Surface Water, Attention: Permits Processing Unit, P.O. Box 1049, Columbus, 43216, within thirty days of the date of this public notice.

AS, 1/25/02

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Ohio EPA

DIVISION OF SURFACE WATER

Antidegration Addendum

In accordance with Ohio Administrative Code 3745-1-05, additional information may be required to complete your application for a permit to install or NPDES permit. For any application for which there might be an increase in the level of pollutants being discharged (NPDES and/or PTI) or for which there might be some activity taking place within a stream bed, the processing of the permit may have to go through various procedures as outlined in the above stated rule. The rule outlines various procedures for public participation as well as procedures pertaining to the levels of review necessary. The levels of review necessary depend on the degradation being considered/requested. The rule also outlines various exclusions from portions of the application and review requirements and waivers that the Director may grant as questions. The answers provided will allow the Ohio EPA to determine if additional information is needed. **All projects that require both an NPDES and PTI should submit both applications simultaneously to avoid going through the antidegradation process separately for each permit.**

A. **Applicant:** American Energy Corporation

Facility Owner: American Energy Corporation

Facility Location (city and county): Beallsville, Belmont County

Application or Plans Prepared By: Jack A. Hamilton & Assoc., Inc.

Project Name: Reactivation of Pond 002

NPDES Permit Number (if applicable): OIL00091*ED OH0059552

B. **Antidegradation Applicability**

Is the application for? (check as many as apply):

____ Application with no direct surface water discharge (Projects that do not meet the applicability section of 3745-1-05(H) 1, i.e.. On site disposal, extensions of sanitary sewers spray irrigation, indirect discharger to POTW, etc.). (Complete Section E)

____ Renewal NPDES application or PTI application with no requested increase in loading of currently permitted pollutants (Complete Section E. Do not complete Sections C or D).

____ PTI and NPDES application for a new wastewater treatment works that will discharge to a surface water. (Complete Sections C and E)

__✓__ An expansion/**modification** of an existing wastewater treatment works discharging to a surface water that will result in any of the following (PTI and NPDES): (Complete Section C and E)

- ☐▹ addition of any pollutant not currently in the discharge, or
- ✓☐▹ an increase in mass or concentration of any pollutant currently in the discharge, or
- ☐▹ an increase in any current pollutant limitation in terms of mass or concentration.

_____ PTI that involves placement of fill or installation of any portion of a sewerage system (i.e., sanitary sewers, pump stations, WWTP, etc.)within 300 feet of a stream bed. Please provide information on an attached sheet (i.e., number of stream crossings, fill placement, etc.) and complete section E.

_____ Initial NPDES permit for an existing treatment works with a wastewater discharge. (Complete Sections C, D and E)

_____ Renewal NPDES permit or modification to an effective NPDES permit that will result in any of the following: (Complete Section C and E)

- ☐ a new permit limitation for a pollutant that previously had no limitation, or
- ☐ an increase in any mass or concentration limitation of any pollutant that currently has a limitation.

_____ Other projects with no direct surface water discharge (i.e., on site disposal, extensions of sanitary sewers, spray irrigation, indirect discharger to POTW, etc.). (Complete Section E)

C. Antidegradation Information

1. Does the PTI and/or NPDES permit application meet an exclusion as outlined by OAC 3745-1-05(D)(1) of the Antidegradation rule?

_____ Yes (Complete Question C.2)

__X__ No (Complete Questions C.3 and C.4)

2. For projects that would be eligible for exclusions provide the following information.

a. Provide justification for the exclusion.

b. Identify the substances to be discharged, including the amount of regulated pollutants to be discharged in terms of mass and concentration.

c. A description of any construction work, fill or other structures to occur or be placed in or near a stream bed.

3. Are your requesting a waiver as outlined by OAC 3745-1-05(D)(2-7) of the Antidegradation rule?

__X__ No

_____ Yes

If you wish to pursue one of the waivers, please identify the waiver and submit the necessary information to support the request. Depending on the waiver requested, the information required under question C.4 is still required to complete the application.

4. For all projects that do <u>not</u> qualify for an exclusion a report must be submitted evaluating the preferred design alternative, non-degradation alternatives, minimal degradation alternatives, and mitigative techniques/measures for the design and operation of the activity. The information outlined below should be addressed in this report. If a waiver is requested, this section is still required.

a. Describe the availability, cost effectiveness and technical feasibility of connecting to existing central or regional sewage collection and treatment facilities, including long range plans for sewer service outlined in state or local water quality management planning documents and applicable facility planning documents.

b. List and describe all government and/or privately sponsored conservation projects that may have been or will be specifically targeted to improve water quality or enhance recreational opportunities on the effected water resource.

c. Proved a brief description below of all treatment/disposal alternatives evaluated for this application. (If additional space is needed please attach to the end of this addendum).

Preferred design alternative: See Attachment #1

Non-degradation alternative (s): See Attachment #1

Minimal degradation alternative (s): See Attachment #1

Mitigative technique/measure (s): See Attachment #1

At a minimum, the following information must be included in the report for each alternative evaluated. See Attachment #1

d. Outline of the treatment/disposal system evaluated, including the costs associated with the equipment, installation, and continued operation and maintenance.

e. Identify the substances to be discharged, including the amount of regulated pollutants to be discharged in terms of mass and concentration.

f. Describe the reliability of the treatment/disposal system, including but not limited to the possibility of recurring operation and maintenance difficulties that would lead to increased degradation.

g. Describe any impacts to human health and the overall quality and value of the water resource.

h. Describe and provide an estimate of the important social and economic benefits to be realized through this proposed project. Include the number and types of jobs created and tax revenues generated.

i. Describe environmental benefits to be realized through this proposed degradation.

j. Describe and provide an estimate of the social and economic benefits that may be lost as a result of this project. Include the impacts on commercial and recreational use of the water resource.

k. Describe the environmental benefits lost as a result of this project. Include the impact on the aquatic life, wildlife, threatened or endangered species.

l. A description of any construction work, fill or other structures to occur or be placed in or near a stream bed.

m. Provide any other information that may be useful in evaluating this application.

D. Discharge Information

1. For treatment/disposal systems constructed pursuant to a previously issued Ohio EPA PTI, provide the following information:

PTI Number	Unknown -	Issued prior to Feb. 1984
PTI Issuance Date	Unknown	
Initial Date of Discharge	Unknown	

2. Has the appropriate NPDES permit application form been submitted including representative effluent data?

X Yes **The appropriate NPDES Modification form is being submitted.**

_____ No

If no, submit the information as applicable under a OR b as follows:

a. For entities discharging process wastewater attach a completed 2C form.

b. For entities discharging wastewater of domestic origin attach the results of at least one chemical analysis of the wastestream for all pollutants for which authorization to discharge is being requested and a measurement of the daily volume (gallons per day) of wastewaters being discharge.

E. Base on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information is, to the best of my knowledge and belief, true, accurate and complete.

This section must be signed by the same responsible person who signed the accompanying permit application or certification as per 40 CFR 122.22.

Signature _____

Date 1/2/02

disk/Antiform
6/24/98

RESPONSE: ANTIDEGRADATION ADDENDUM
OHIO ENVIRONMENTAL PROTECTION AGENCY - DIVISION OF SURFACE WATER

PROPOSED CENTURY MINE COARSE COAL REFUSE DISPOSAL FACILITY
WAYNE TOWNSHIP, BELMONT COUNTY

Applicant: The American Energy Corporation

C.4. For all projects that do not qualify for an exclusion a report must accompany this application evaluating the preferred design alternative, non-degradation alternatives, minimal degradation alternatives, and mitigative techniques/measures for the design and operation of the activity. The information outlined below should be addressed in this report. If a waiver is requested, this section is still required.

C.4.a. Describe the availability, cost effectiveness and technical feasibility of connecting to existing central or regional sewage collection and treatment facilities, including long range plans for sewer service outlined in state or local water quality management planning documents and applicable facility planning documents.

RESPONSE: There are no central or regional sewage collection or treatment facilities in the area. Long range plans for these facilities do not exist.

The above response applies to the preferred, minimal degredation and non-degredation alternatives evaluated.

C.4.b. List and describe all government and/or privately sponsored conservation projects that may have been or will be specifically targeted to improve water quality or enhance recreational opportunities on the effected water resource.

RESPONSE: There are no government or privately sponsored conservation projects targeted to improve water quality or enhance recreational opportunities on the affected water resource. The property on which the disposal facility is to be sited and the affected water resource are owned by The American Energy Corporation. Access is restricted to company personnel and or professionals upon request.

The above response applies to the preferred, minimal degredation and non-degredation alternatives evaluated.

AEC 02994

RESPONSE: ANTIDEGRADATION ADDENDUM
OHIO ENVIRONMENTAL PROTECTION AGENCY - DIVISION OF SURFACE WATER

PROPOSED CENTURY MINE COARSE COAL REFUSE DISPOSAL FACILITY
WAYNE TOWNSHIP, BELMONT COUNTY

Applicant: The American Energy Corporation

C.4.c. Provide a brief description below of all treatment/disposal alternatives evaluated for this application and their respective operational and maintenance needs.

Preferred Design Alternative:

Technical Feasibility:

RESPONSE: The proposed valley-fill disposal design is the preferred alternative. The project is designed for disposal of coarse coal refuse in an environmentaly acceptable manner. All construction will comply with the rules and policies of the State of Ohio, and U. S. Department of Labor, Mine, Safety and Health Administration. Valley fills are the common and accepted way of disposing large volumes of coal waste material, and has been technically proven throughout the coal mining regions.

The proposed facility has a storage capacity of 14.4 million cubic yards of coal refuse. The fill area is aproximately 112.2 acres. The required permit area is 154.4 acres with the inclusion of ponds and other environmental controls.

The mine will generate 1.5 to 1.8 million cubic yards of coarse coal refuse annually.

Permanent control measures and facilities include diversion ditches, benching side slopes, and establishing vegetative cover on final fill surfaces. Permanent diversion channels will divert fresh water from the working area. Control ditches and structural benches on the refuse surface will contain runoff from the project area thereby preventing flow from freely discharging over side slopes. Waterways suseptible to erosion will be protected by vegetation or riprap. The final fill surface will be capped with clay, soil, seeded and mulched. A permanent stand of grass will be established to mitigate erosion and sedimentation, and serve as a wildlife habitat.

Availability:

The topography of the site and most of Belmont County is composed of ridges and valleys. The coarse coal disposal site proposed will utilize a narrow valley of an unnamed tributary of Piney Creek. Flow in this valley is intermittent. The proposed site s located on Company owned adjacent west of the preparation plant now under construction.

AEC 02995

PROPOSED CENTURY MINE COARSE COAL REFUSE DISPOSAL FACILITY
WAYNE TOWNSHIP, BELMONT COUNTY

Applicant: The American Energy Corporation

C.4.c. *Provide a brief description below of all treatment/disposal alternatives evaluated for this application and their respective operational and maintenance needs.*

Preferred Design Alternative:

Reliability:

RESPONSE: The construction of the site will be under the guidance of the mine's Chief Engineer. A quality control and assurance program wil be implemented to monitor facility construction. Completed construction will be certified by the Chief Engineer.

Groundwater and surface water will be protected through use of diversion ditches, a clay liner, sediment ponds and temporary erosion and control measures such as haybales, silt fence and seeding. All control facilities will be maintained for their designed operation to insure proper function.

Operation and Maintenance Needs:

Routine maintenance wil include re-seeding, replacing riprap and drains, removal of debris from the site, observations and recoed keeping. A surveillance of the area will be made immediately following any unusual events such as heavy rains, heavy frost and abnormal structural behavior. The most important maintenance tasks at these times are the prompt backfilling of all erosional scarps and slumps, and the repair and improvement of sod drainage systems and riprap.

Non-Degrdation Alternatives:

RESPONSE: Non-degradation alternatives include: (1) underground injection, and (2) shipment off site.

Technical Feasibility:

Underground injection involves back-stowing to mined-out areas. This requires special OEPA permits and studies on the potential impact to groundwater. Also, it requires more labor, new equipment to reach old mine workings, increased roof control maintenance, and special ventilation. The safety of miners working in these old works would very much be at risk.

Off-site shipment, in this region, involves disposal to another valley. Nothing is solved by this alternative since the same environmental concerns must be re-addressed. Transportation is another factor. The number of truck loads annually required is estimated to be 98,000. The impact to local roads includes: significant volume increase in traffic, accelerated wear and tear, and greater road hazard to other motorists.

RESPONSE: ANTIDEGRADATION ADDENDUM
OHIO ENVIRONMENTAL PROTECTION AGENCY - DIVISION OF SURFACE WATER

PROPOSED CENTURY MINE COARSE COAL REFUSE DISPOSAL FACILITY
WAYNE TOWNSHIP, BELMONT COUNTY

Applicant: The American Energy Corporation

C.4.c. Provide a brief description below of all treatment/disposal alternatives evaluated for this application and their respective operational and maintenance needs.

Non-Degrdation Alternatives:

Availability:

RESPONSE: The availability of old mine workings is uncertain. The workings of the existing mine underlying the property have been sealed for over 20 years and are likely flooded. Access is unlikely and would pose danger to the lives of workers involved.

Shipment off-site would be to to Harrison County Solid Waste Disposal Facility, west of Cadiz, Ohio on State Route 250, approximately 55 miles away. There is no additional construction required as a result of this alternative.

Reliability:

RESPONSE: Underground injection is not practiced anywhere in this region due to significant uncertainties in permitting, impact to groundwater, worker safety and available storage area.

Shipment off-site would have greatest uncertainty during the winter months. Icy roads would limit steady shipment schedules and create added risk to others using the road.

Operation and Maintenance:

Underground injection would operate according to permit plans set by the Regulatory Authorities. Specifics can not be determined at this time. Maintenance would be performed as required.

Shipment off-site: n/a.

AEC 02997

PROPOSED CENTURY MINE COARSE COAL REFUSE DISPOSAL FACILITY
WAYNE TOWNSHIP, BELMONT COUNTY

Applicant: The American Energy Corporation

C.4.c. Provide a brief description below of all treatment/disposal alternatives evaluated for this application and their respective operational and maintenance needs.

Minimal Degrdation Alternative:

Technical Feasibility:

The minimal degradation alternative is to backfill coarse coal refuse in the surface mine pits permitted for the site under ODNR permit D-1159. This method is acceptable to ODNR, specific to permitting requirements. The technique is commonly applied throughout the coal fields.

This alternative would keep the valley bottom lands untouched. The trade-off is volume. This alternative offers 1.8 million cubic yards capacity compared to the 14.3 million cubic yards in the preferred alternative. Site life is approximately one year. Nothing is served by this alternative. The mine will require a new disposal area after one year. Since it takes nearly three years to permit a facility, this alternative provides a temporary solution at best. Long-term needs of the mining operation are not met.

Availability:

RESPONSE: Backfilling coal refuse in the surface mine would provide 1.8 million cubic yards of disposal capacity.

Reliability:

RESPONSE: This alternative has a high degree of reliablity for its one year project life.

Operation and Maintenance:

The site would be operated and maintained in the same manner as described in the preferred alternative.

PROPOSED CENTURY MINE COARSE COAL REFUSE DISPOSAL FACILITY
WAYNE TOWNSHIP, BELMONT COUNTY

Applicant: The American Energy Corporation

C.4 .c. *Provide a brief description below of all treatment/disposal alternatives evaluated for this application and their respective operational and maintenance needs (continued).*

Mitigative technique/measure(s):

Preferred Alternative:

RESPONSE: Water quality impacts will be mitigated through proper execution of construction, operations, maintenance water monitoring and reclamation.

Water from all disturbed areas will be collected in ponds, monitored for quality standards set forth in the NPDES Permit issued by the Ohio EPA, treated if necessary, then released to receiving waters of the State.

Permanent control measures and facilities include diversion ditches, benching side slopes and establishing vegetative cover over final fill surfaces. Permanent diversion ditches will be constructed along the western side of the project to divert runoff from working areas. The east side will be protected by a diversion system along the plant road. Control ditches and structural benches will channel runoff from the project area thereby preventing flows from freely discharging over side slopes. Waterways susceptable to erosion will be protected by vegetation or riprap. The final fill surface will be clay capped, covered with soil, seeded and mulched. A permanent stand of grass will be established to mitigate erosion and sedimentation.

Long-term impacts will be mitigated through implementation of the reclamation plan.

The proposed facility incorporates the following preventative masures. First, a groundwater underdrain system will be installed to collect and convey down-gradient all seepage beneath the structure. Second, an impervious clay liner will be installed to separate the groundwater underdrain system from the coal refuse. The liner will be three feet thick minimum and compacted to a permeability of less than E-07 cm/sec. Along the valley bottom, the liner will be graded at existing grades to allow for leachate collecton. Third, a leachate collector drain system will be installed to convey leachate to the toe of the structure for drainage into a clay lined pond for treatment, if necessary. Fourth, the coal refuse will be compacted to to reduce oxidation of the acid producing constitutents, mainly pyritic sulphur and seepage through the refuse material. Fifth, an impervious cap will be installed to prevent surface water from migrating into and through the refuse fill. This will eliminate or reduce the chance for leachate generation. The surface will be graded to promote immediate drainage. Water will not pond or accumulate on the reclaimed surface.

Applicant: The American Energy Corporation

C.4 .c. Provide a brief description below of all treatment/disposal alternatives evaluated for this application and their respective operational and maintenance needs (continued).

Mitigative technique/measure(s):

Preferred Alternative (continued):

RESPONSE: Impacts to wildlife during operations will be minimized by limiting the amount of disturbed acreage. Construction of sediment ponds and creation of temporary brush piles will provide temporary habitat for wildlife and aquatic life. Tree lines along undisturbed sections of the permit area will provide travel lanes and cover for wildlife. Upon final reclamation the seeded areas will provide a favorable mixture of open areas for food and the natural undisturbed woods and brush lands for cover to promote the successful return of wildlife to the area.

Minimal Degredation Alternative:

This is the same as the preferred alternative with the exception of installation of the groundwater collection system, clay liner and leachate collector all locatedin the valley bottom.

Non-Degredation Alternative:

Does not apply.

Applicant: The American Energy Corporation

C.4.d. Outline of the treatment/disposal system evaluated, including the costs associated with the equipment, installation, and continued operation and maintenance.

Preferred Alternative:

RESPONSE: The costs associated with the pollution control systems proposed are as follows:

Control Feature	Cost
Ponds	$526,212

The estimated annual maintenance and operating cost is $62,125.

Minimal Degradation Alternative:

The costs associated with the pollution control systems proposed are as follows:

Control Feature	Cost
Ponds	$225,500

The estimated annual maintenance and operating cost is $28,900.

Non-Degradation Alternative:

Does not apply.

Applicant: The American Energy Corporation

C.4.e. Identify the substances to be discharged, including the amount of regulated pollutants to be discharged in terms of mass and concentration.

Preferred Alternative:

RESPONSE

Only fill materials are to be placed below the ordinary highwater mark (OHWM) in the valley. These materials are composed of unclassified subgrade used as necessary for foundation of the clay liner, and the clay liner itself.

Total linear impact is 7,161 feet. The volume of fill is 1340 cubic yards of fill to be placed below the OHWM.

Minimal Degredation Alternative:

There is no fill to be placed in the valley bottom.

Non-Degradation Alternative:

Does not apply.

Applicant: The American Energy Corporation

C.4.f. *Describe the reliability of the treatment/disposal system, including but not limited to the possibility of recurring operation and maintenance difficulties that would lead to increased degradation.*

Preferred Alternative:

RESPONSE: The proposed disposal system with associated environmental controls is the same or similar to those used successfully throughout the coal industry. The site will be maintained to operate as designed. Repairs will be made as needed on a timely basis for full compliance with Federal and State laws.

Minimal Degradation Alternative:

RESPONSE: The proposed disposal system with associated environmental controls is the same or similar to those used successfully throughout the coal industry. The site will be maintained to operate as designed. Repairs will be made as needed on a timely basis for full compliance with Federal and State laws.

Non-Degradation Alternative:

Does not apply.

C.4.g. *Describe any impacts to human health and the overall quality and value of the water resource.*

Preferred Alternative:

RESPONSE: No substances are expected to be discharged in quantities that could impact human health or the environment. Effluent limits will be met for discharge.

Minimal Degradation Alternative:

No substances are expected to be discharged in quantities that could impact human health or the environment. Effluent limits will be met for discharge.

Non-Degradation Alternative:

Does not apply.

C.4.h. Describe and provide an estimate of the important social and economic benefits to be realized through this proposed project. Include the number and types of jobs created and tax revenues generated.

Preferred Alternative:

RESPONSE: The American Energy Corporation will have 333 full-time employees when the mine becomes fully operational by the year 2003. The life of the operation is projected to be approximately 30 years. The annual payroll will be $17.5 million. Annual tax revenues paid to the federal, state and local municipalities will be $7.3 million. Annual royalties will be $5 million. In addition, $33 million will be spent locally on mining supplies, and $5 million on insurance over the project life.

There are no additional jobs created or lost as a result of the preferred alternative. The American Energy Corporation has on staff the personnel, and access to necessary equipment to implement the proposrd project.

Minimal Degradation Alternative:

There are no additional jobs created or lost as a result of the preferred alternative. The American Energy Corporation has on staff the personnel, and access to necessary equipment to implement the proposrd project.

Non-Degradation Alternative:

An additional 45 trucks and 135 truck drivers would be required to implement this alternative. This would require each truck to make two round trips per hour shift. Haulage would be 365 days per year, 24 hours per day.

The cost of trucking is estimated at $6.25 per ton. A landfill tipping fee is estimated at $5.00 per ton. An incremental cost of $11.25 per ton added to the mining cost of production would make the operation uneconomic. The Century mine would not exist with these economics.

PROPOSED CENTURY MINE COARSE COAL REFUSE DISPOSAL FACILITY
WAYNE TOWNSHIP, BELMONT COUNTY

Applicant: The American Energy Corporation

C.4.i. Describe environmental benefits to be realized through this proposed project.

Preferred Alternative:

RESPONSE The completed project will clay capped, covered with soil and seeded. A broad plateau will be created when this proposed facility is ultimately tied to the reclaimed existing disposal area. The site will be planted for grass. Potential end-uses include new farm land, pastures for livestock grazing, or wildlife habitat.

Minimal Degradation Alternative:

The reclaimed surface mine would have the same benefits as the preferred alternative.

Non-Degradation Alternative:

Does not apply.

Applicant: The American Energy Corporation

C.4 .j. Describe and provide an estimate of the social and economic benefits that may be lost as a result of this project. Include the impacts on commercial and recreational use of the water resources.

Preferred Alternative:

RESPONSE: The American Energy Corporation will have a payroll amoung the largest of any business in Belmont County. Studies have shown that each AEC job creates 10 supporting jobs in the local economy. The proposed coal refuse disposal area is vital to sustained operations at the mine. Closing the mine would potentially impact 3,300 jobs in the area.

The local economy is depressed due to closings in recent years of steel plants and numerous coal mines. Unemployment is higher than the national average.

There are no social and economic benefits lost as a result of the construction of the preferred alternative. The impacted stream segments are located on property owned and controlled by The American Energy Corporation.

There are no commercial and recreational benefits lost as a result of the construction of the preferred alternative. The impacted stream segments are located on property owned and controlled by The American Energy Corporation.

There are no effects on recreation, tourism, aesthetics or other human use and enjoyment as a result of the construction of the preferred alternative. The impacted stream segments are located on property owned and controlled by the American Energy Corporation.

Applicant: The American Energy Corporation

C.4 .j. Describe and provide an estimate of the social and economic benefits that may be lost as a result of this project. Include the impacts on commercial and recreational use of the water resources.

Minimal Degradation Alternative:

RESPONSE: There are no social and economic benefits lost as a result of the construction of this alternative. The impacted stream segments are located on property owned and controlled by The American Energy Corporation.

There are no commercial and recreational benefits lost as a result of the construction of this alternative. The impacted stream segments are located on property owned and controlled by The American Energy Corporation.

There are no effects on recreation, tourism, aesthetics or other human use and enjoyment as a result of the construction of this alternative. The impacted stream segments are located on property owned and controlled by the American Energy Corporation.

Non-Degradation Alternative:

There are no social and economic benefits lost as a result of the construction of the non-degradation alternative.

There are no commercial and recreational benefits lost as a result of the construction of this alternative.

There are no effects on recreation, tourism, aesthetics or other human use and enjoyment as a result of the construction of this alternative.

C.4.k. Describe the environmental benefits lost as a result of this project. Include the impact on the aquatic life, wildlife, threatened or endangered species.

Preferred Alternative:

RESPONSE: Aquatic life benefits will be lost within the impacted stream segments as a result of the construction of the preferred alternative.

Wildlife habitat will be disrupted short-term during operations. Upon completion, the area will be reclaimed and become a long-term wildlife habitat. Specific plantings are being planned in cooperation with the Ohio Department of Natural Resources.

There are no known threatened or endangered species in the project area. There are no benefits gained or lost as a result of construction of the preferred alternative.

Minimal Degradation Alternative:

Aquatic life benefits will not be lost as a result of constructing the minimal degradation alternative.

Wildlife habitat will be disrupted short-term during operations. Upon completion, the area will be reclaimed and become a long-term wildlife habitat. Specific plantings are being planned in cooperation with the Ohio Department of Natural Resources.

There are no known threatened or endangered species in the project area. There are no benefits gained or lost as a result of construction of the preferred alternative.

Non-Degradation Alternative:

Aquatic benefits would not be lost as a result of the non-degradation alternative.

Wildlife benefits gained as a result of the non-degradation alternative are nominal, if any. The majority of the area is is impacted by agricultural land use thus the quality of the wildlife habitat is limited.

There are no known threatened or endangered species in the project area. There are no benefits gained or lost as a result of construction of the non-degradation alternative.

PROPOSED CENTURY MINE COARSE COAL REFUSE DISPOSAL FACILITY
WAYNE TOWNSHIP, BELMONT COUNTY

Applicant: The American Energy Corporation

C.4 .l. A description of any construction work, fill or other structures to occur or to be placed in or near a stream bed.

Preferred Alternative:

RESPONSE: The proposed site is an upstream extension of an existing valley-fill coal refuse disposal facility formerly operated by the Y & O Coal Company. The new site will fill the valley of an unnamed tributary of Piney Creek, as shown on maps of the attached engineering report. The fill area will be approximately 112.2 acres. The maximum thickness is projected to be 320 feet, as measured from the toe, elevation 970', to ultimate height of 1288.6', mean sea level.

Underdrains will be placed along the valley floor, and extend to all groundwater seeps having discernable flow. A three-foot thick clay liner will be placed over thisgroundwater collection system. Sediment ponds will be constructed, as shown in attached plans, to collect runoff from all disturbed ground during construction and normal operations of the site.

Minimal Degradation Alternative:

Surface mining and associated coal refuse backfill would be conducted along the valley walls, above or outside all stream buffer zones.

Non-Degradation Alternative:

Does not apply.

C.4.m. Provide any other informationthat may be useful in evaluating this application.

RESPONSE: None.

Receipt of Application
for
Antidegradation Project

This section to be completed for all antidegradation projects.

District Contact: ABBOT STEVENSON Date: _____

Name of Project: AMERICAN ENERGY CORP. - CENTURY MINE

Mailing Address: 43521 MAYHUGH HILL RD Location: _____

BEALLSVILLE OH _____

43716 _____

County where project located: BELMONT

Type of permit application (check all that apply):

NPDES (Permit No. OH0009*FD) 06-6766

- ____ Renewal
- ✓ Modification
- ____ Initial (existing discharger)
- ____ Initial (new discharger)

PTI (Permit No. 06-6778)

- ✓ New source (no existing plant)
- ____ Sewerage system (i.e. sewers, pump stations, etc.) in or near stream bed

Date complete antidegradation application received (submit copy of addendum with form): 12/20/01 and 1/14/02

Stream or waterbody affected and subsequent stream network (include river basin and indicate if subsequent stream is within two-five miles of discharge point): unnamed tributaries to Piney Creek then Captina Creek; and unnamed tributary of Captina Creek to Captina Cr.

Stream classification:

- ____ Limited quality water
- ✓ General high quality water
- ____ Superior high quality water*
- ____ Outstanding national resource water*
- ____ Outstanding high quality water*
- ____ State Resource Water*
- ____ Lake Erie*

Note: "*" indicates public hearing is required. Please complete page 2.

Do any exclusions apply or did they request a waiver? Yes or (No) (circle one) Please specify which exclusion applies or waiver requested:

_____

_____

Any known controversy or public concerns with the project? Known interested parties? (Supply addresses if so) Please explain.

_____

_____

_____

This section to be completed if a public hearing is required (i.e. ONRW, OHQW, SHQW, SRW or Lake Erie).

Please indicate at least two potential locations near the project site in which the public hearing could be held (i.e. schools, libraries, county commisioners office, etc.):

_____

_____

_____

Please indicate dates not available for hearing (approximately 60-90 days from receipt of application):

_____

This section to be completed for all projects discharging to state resource waters and an increase in pollutants being discharged is being requested (i.e. new wastestreams, new facility, plant expansions, production increases, etc.). This information will be utilized to determine the reserve portion of the remaining available pollutant assimilative capacity for domestic wastestreams (C)(7)(b) or if the discharge of toxics from industrial sources may be permitted (i.e. maximum of 5% change in ambient concentration) (C)(7)(a) through stream modeling procedures.

Is the proposal for an industrial or domestic wastestream? Industrial or municipal (circle one). Please give brief description of the proposed type of discharge (i.e. groundwater remediation project, controlled discharge, etc.):

_____

_____

Please describe the exact location of the proposed discharge(s). A map can be attached if preferred.

_____

_____

What is the proposed "design" flowrate of the project? (If there is more then a single discharge point associated with the proposal, please indicate individual flows for each point): _____

If there is an existing discharge, what is the current flowrate?: _____

For controlled discharges, what are the upstream flow conditions under which a discharge may be authorized (i.e. five times effluent flow, ten times, etc.)?: _____

_____

Provide the following information on the proposed pollutant discharge increase:

Parameter	Requested Limits (conc. and/or loads)	Existing limits (if appropriate)

INTER-OFFICE COMMUNICATION

TO: Patti Smith, DSW, Columbus

Date to CO: 8 Dec

FROM: SEDO/DSW

SUBJECT: Entity: American Energy Corp. NPDES No.: ILO00791 *62

ANTIDEGRADATION STATUS ☞ ANTIDEG ☒ NON ANTIDEG ☐			
Permit Action	NEW __ REV __ MOD X NPR __ REN __ TRAN __	Major __ Minor V	Agent AS

THE FOLLOWING ITEMS ARE INCLUDED IN THIS NPDES PACKAGE

1. ☒ Draft Permit Action
2. ☐ Limitation Justification Report - SEDO File Only
3. ☐ Reasonable Potential Calculation
4. ☐ Antidegradation SEJ
5. ☐ Application Updates/Additions
6. Other: _____

ADDITIONAL INFORMATION

Prepermit Inspection Date: _____

Prepermit Letter Sent: Yes __ No __

Flow Data:

Outfall	Flow (gpd)*	Outfall	Flow (gpd)
012	10,865	016	122,887
013	67,702	017	10,000
014	93,215	002	66,000
015	9750		

* value used for loading calculation

Compliance Status with Expired Permit => ☑ Compliance ☐ Noncompliance ☐ Significant ☐ NA

Comments: _____

Supervisor: _____ Date: 8/26/02

SOCIAL/ECONOMIC JUSTIFICATION REPORT FOR THE LOWERING OF WATER QUALITY FOR RECEIVING STREAMS:
Piney Creek and Captina Creek
for the Addition of Wastewater Treatment Pond
Outfalls #002, 012-016, and Sanitary Treatment Plant Outfall 017
and changes to Outfall #011
at American Energy Corp. Century Mine, Belmont Co., Ohio

PTI NOs. 06-6766 and 6778 NPDES NO. 0IL00091*GD
DATE: July 2, 2002

The applications for Permits to Install and NPDES Permit modifications were evaluated in accordance with the Antidegradation Rules 3745-1-05 OAC. The proposed activity will result in a lowering of water quality and the information submitted by the applicant in accordance with OAC 3745-1-05 (B)(2) (c) - (g) and other information and facts were evaluated. The following issues were considered in recommending issuance of the permit(s):

(a) THE MAGNITUDE OF THE PROPOSED LOWERING OF WATER QUALITY:

Ohio EPA records of mining permits go back to 1969 at this site. An underground mine was operated here until 1978. It consisted of a preparation plant, refuse disposal and a bath house with a sewage treatment plant. The refuse disposal area was reclaimed after 1984 and ODNR DOR bond was released in 1992. The entire site was reclaimed by the time the NPDES permit was renewed in 1993. Ponds 008 and 011 (which are still under permit) as well as pond 002 and the old freshwater pond, are still on site. Piney Creek has therefore historically been impacted by mining operations.

Discharges from pond 002 is only expected when excess water is pumped from the mine, exceed the need for water reuse underground. Dust control operations consume a large amount of water, thus it is expected that most of the water in pond 002 will be reused not discharged. However, if necessary the pond could discharge up to an estimated maximum of 66,000 gpd. .

There are no Water Quality Standards for any of the parameters limited in the NPDES permits except for pH. Federal EPA regulations limit iron, manganese, and total suspended solids only until a storm greater than the 2 year storm for ponds 012-016. Discharges from ponds 012-016 are only expected during or immediately after rainfall events. These ponds will be constructed as a function of time as the refuse pile is enlarged. The amount of pollutants discharged from these treatment ponds will be negligible (3-4% of the flow in Piney Creek). Pond 015 discharges to an unnamed tributary to Captina Creek discharges only 9750 gallons a day which is insignificant compared to Captina Creek.

an exception to what one normally sees in this county. Several projects and thousands of dollars have been spent to mitigate pollution problems in the watershed.

(g) THE COST OF THE WATER POLLUTION CONTROLS ASSOCIATED WITH THE PROPOSED ACTIVITY:

The cost of construction for ponds 012 through 016 is estimated at $526,212 and 002 is estimated at $5000. The cost of construction of the pollution control for the refuse disposal area in order to minimize leachate generation is $958,000 and consists of clay liner, underdrains, final cap and cover, and seeding.
The annual maintenance for the ponds and refuse disposal area is estimated to be $65,000.

(h) THE COST EFFECTIVENESS AND TECHNICAL FEASIBILITY OF THE NON-DEGRADATION ALTERNATIVES, MINIMAL DEGRADATION ALTERNATIVES OR MITIGATIVE TECHNIQUE ALTERNATIVES AND THE EFFLUENT REDUCTION BENEFITS AND WATER QUALITY BENEFITS ASSOCIATED WITH SUCH ALTERNATIVES:

Non-degradation alternatives: The non-degradation alternative for pond 002 is to not use it and pump the water to another pond already under permit. The benefit would be to affect a little bit less length of the stream but the costs due to pumping would almost double.
For outfall 017, adding a direct discharge for the sewage treatment plant, the non-degradation alternatives examined were spray back irrigation and construction of a n0n-discharging wetland. Both were ruled our for lack of available suitable sites (the terrain is steep, there is minimal pasture, mostly trees).
For outfalls 012-016, the alternatives that were examined were placing the refuse back underground and disposal off site in a licensed landfill. Disposal of refuse was examined since the purpose of these ponds is to control and treat the water runoff from the refuse area. Placing refuse underground is not feasible because this is a longwall operation that doesn't create voids. Old works would need to be used, and their condition would be unpredictable. Also, there would be concern for worker safety because of this. Impact on groundwater would also be a concern. The second alternative, hauling to a landfill, would expend transportation costs and consume landfill space. This refuse site will be constructed over an old refuse pile. The new fill will have new technology for leachate collection and cap design and construction, which should improve minimizing impact to groundwater.
Land application of the effluent from the ponds was evaluated. These systems are typically used to treat sanitary waste waters for flows less than a million gallons a day. The metals and dissolved solids build-up would prevent continual use of the spray area. The maximum daily flow from the mining operations could be 0.3 mgd. The land application option is cost prohibitive due to storage pond sizes, spray area, mechanical equipment and piping costs.

Minimal degradation alternative: It was suggested by the facility that the minimal degradation alternative is disposal in nearby strip mine pits under ODNR mining permit D-1159. However, the size of the alternate site is 1/7th that of the preferred alternative. IT would not be a long term solution.

(m) ANY OTHER INFORMATION THAT WAS CONSIDERED REGARDING THE PROPOSED ACTIVITIES AND THE AFFECTED WATER BODY:.

The proposed mining operations will provide a temporary economic benefit to the local area. The mining operation will create temporary environmental degradation of the area.

COMPLETED BY: _____ 8/22/07
Abbot Stevenson (Date)

REVIEWED BY: _____

Bruce E. Goff, P.E.

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AEC 03015

OhioEPA

Ohio Environmental Protection Agency INTER-OFFICE COMMUNICATION

TO: Patti Smith, DSW, CO
FROM: Abbot Stevenson through Bruce Goff, DSW, SEDO
DATE: January 24, 2002
RE: American Energy Corp., Century Mine 0IL00091*FD, PTI's 06-6766 and 06-6778

This is a pretty confusing collection of PTIs and NPDES modifications that must go through antidegradation.

PTI 06-6766 is for the addition of six new treatment ponds (012-016) for treating runoff from a new refuse disposal area; PTI 06-6778 is for the addition of an existing unpermitted pond that they want to use as a treatment pond (002) to treat water pumped from the mine. The NPDES modification is for adding all of these outfalls and to modify existing outfall 011 to also discharge sanitary wastewaters.

If you have any questions please contact me at your convenience. Thanks.

Ohio Environmental Protection Agency

INTER-OFFICE COMMUNICATION

TO: Patti Smith, DSW, CO

FROM: Abbot Stevenson through Dave Schuetz, DSW, SEDO

DATE: July 16, 2002

RE: American Energy Corp. Century Mine PTIs and NPDES Permit Modification

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The enclosed antidegradation projects package for American Energy Corp. Century Mine includes 2 PTIs and an NPDES permit modification as follows:

PTI 06-6766: Contains plans for treatment ponds 012-016 for runoff from the new (proposed under PTI 06-6937) refuse disposal area.

PTI 06-6778: Contains plans for the treatment pond outfall 002; a new outfall 017 for the bath house sewage plant; and 2 non-discharging treatment ponds 019 and 1-S.

0IL00091*GD: Covers the addition of outfalls 002, 012-017 and the addition of permission to discharge sanitary wastewater (601) from existing permitted pond 011.

In addition to these permits, Laura Fay of the 401 section is processing a 401 certification. These permits should not be issued until the 401 certification is also ready to be issued.

There are 2 other American Energy Corp. Century Mine applications with which the Agency is involved. CO needs to decide whether these permits should be held up until processing of ALL applications is complete. They are:

PTI 06-6937: This PTI is being processed by ODNR's Division of Mineral Resource Management under the MOU for coal refuse disposal. The PTI covers only the installation of the refuse disposal area and covers no water treatment or discharge issues. Ponds associated with this disposal area are covered under PTI 06-6766.

AEC 03017

Ohio EPA

DIVISION OF SURFACE WATER

Antidegration Addendum

In accordance with Ohio Administrative Code 3745-1-05, additional information may be required to complete your application for a permit to install or NPDES permit. For any application for which there might be an increase in the level of pollutants being discharged (NPDES and/or PTI) or for which there might be some activity taking place within a stream bed, the processing of the permit may have to go through various procedures as outlined in the above stated rule. The rule outlines various procedures for public participation as well as procedures pertaining to the levels of review necessary. The levels of review necessary depend on the degradation being considered/requested. The rule also outlines various exclusions from portions of the application and review requirements and waivers that the Director may grant as questions. The answers provided will allow the Ohio EPA to determine if additional information is needed. **All projects that require both an NPDES and PTI should submit both applications simultaneously to avoid going through the antidegradation process separately for each permit.**

A. **Applicant:** American Energy Corporation

Facility Owner: American Energy Corporation

Facility Location (city and county): Beallsville, Belmont County

Application or Plans Prepared By: William J. Siplivy, P.E., Inc.

Project Name: Century Mine Refuse Disposal Sediment Ponds

NPDES Permit Number (if applicable): OIL00091*ED OH0059552

B. **Antidegradation Applicability**

Is the application for? (check as many as apply):

____ Application with no direct surface water discharge (Projects that do not meet the applicability section of 3745-1-05(H) 1, i.e.. On site disposal, extensions of sanitary sewers spray irrigation, indirect discharger to POTW, etc.). (Complete Section E)

____ Renewal NPDES application or PTI application with no requested increase in loading of currently permitted pollutants (Complete Section E. Do not complete Sections C or D).

_X_ PTI and NPDES application for a new wastewater treatment works that will discharge to a surface water. (Complete Sections C and E)

____ An expansion/modification of an existing wastewater treatment works discharging to a surface water that will result in any of the following (PTI and NPDES): (Complete Section C and E)

- ☐ addition of any pollutant not currently in the discharge, or
- ☐ an increase in mass or concentration of any pollutant currently in the discharge, or
- ☐ an increase in any current pollutant limitation in terms of mass or concentration.

_____ PTI that involves placement of fill or installation of any portion of a sewerage system (i.e., sanitary sewers, pump stations, WWTP, etc.) within 300 feet of a stream bed. Please provide information on an attached sheet (i.e., number of stream crossings, fill placement, etc.) and complete section E.

_____ Initial NPDES permit for an existing treatment works with a wastewater discharge. (Complete Sections C, D and E)

_____ Renewal NPDES permit or modification to an effective NPDES permit that will result in any of the following: (Complete Section C and E)

- ☐ a new permit limitation for a pollutant that previously had no limitation, or
- ☐ an increase in any mass or concentration limitation of any pollutant that currently has a limitation.

_____ Other projects with no direct surface water discharge (i.e., on site disposal, extensions of sanitary sewers, spray irrigation, indirect discharger to POTW, etc.). (Complete Section E)

C. Antidegradation Information

1. Does the PTI and/or NPDES permit application meet an exclusion as outlined by OAC 3745-1-05(D)(1) of the Antidegradation rule?

   _____ Yes (Complete Question C.2)

   __X__ No (Complete Questions C.3 and C.4)

2. For projects that would be eligible for exclusions provide the following information.

   a. Provide justification for the exclusion.

   b. Identify the substances to be discharged, including the amount of regulated pollutants to be discharged in terms of mass and concentration.

   c. A description of any construction work, fill or other structures to occur or be placed in or near a stream bed.

3. Are your requesting a waiver as outlined by OAC 3745-1-05(D)(2-7) of the Antidegradation rule?

   __X__ No

   _____ Yes

   If you wish to pursue one of the waivers, please identify the waiver and submit the necessary information to support the request. Depending on the waiver requested, the information required under question C.4 is still required to complete the application.

4. For all projects that do <u>not</u> qualify for an exclusion a report must be submitted evaluating the preferred design alternative, non-degradation alternatives, minimal degradation alternatives, and mitigative techniques/measures for the design and operation of the activity. The information outlined below should be addressed in this report. If a waiver is requested, this section is still required.

a. Describe the availability, cost effectiveness and technical feasibility of connecting to existing central or regional sewage collection and treatment facilities, including long range plans for sewer service outlined in state or local water quality management planning documents and applicable facility planning documents.

b. List and describe all government and/or privately sponsored conservation projects that may have been or will be specifically targeted to improve water quality or enhance recreational opportunities on the effected water resource.

c. Proved a brief description below of all treatment/disposal alternatives evaluated for this application. (If additional space is needed please attach to the end of this addendum).

Preferred design alternative: See attached addendum

Non-degradation alternative (s): See attached addendum

Minimal degradation alternative (s): See attached addendum

Mitigative technique/measure (s): See attached addendum

At a minimum, the following information must be included in the report for each alternative evaluated. See attached addendum

d. Outline of the treatment/disposal system evaluated, including the costs associated with the equipment, installation, and continued operation and maintenance.

e. Identify the substances to be discharged, including the amount of regulated pollutants to be discharged in terms of mass and concentration.

f. Describe the reliability of the treatment/disposal system, including but not limited to the possibility of recurring operation and maintenance difficulties that would lead to increased degradation.

g. Describe any impacts to human health and the overall quality and value of the water resource.

h. Describe and provide an estimate of the important social and economic benefits to be realized through this proposed project. Include the number and types of jobs created and tax revenues generated.

i. Describe environmental benefits to be realized through this proposed degradation.

j. Describe and provide an estimate of the social and economic benefits that may be lost as a result of this project. Include the impacts on commercial and recreational use of the water resource.

k. Describe the environmental benefits lost as a result of this project. Include the impact on the aquatic life, wildlife, threatened or endangered species.

l. A description of any construction work, fill or other structures to occur or be placed in or near a stream bed.

m. Provide any other information that may be useful in evaluating this application.

D. Discharge Information

1. For treatment/disposal systems constructed pursuant to a previously issued Ohio EPA PTI, provide the following information:

PTI Number _____
PTI Issuance Date _____
Initial Date of Discharge _____ **N/A**

2. Has the appropriate NPDES permit application form been submitted including representative effluent data?

__X__ Yes **The appropriate NPDES Modification form is being submitted. Discharge ponds are proposed; no effluent data is currently available**

_____ No

If no, submit the information as applicable under a OR b as follows:

a. For entities discharging process wastewater attach a completed 2C form.

b. For entities discharging wastewater of domestic origin attach the results of at least one chemical analysis of the wastestream for all pollutants for which authorization to discharge is being requested and a measurement of the daily volume (gallons per day) of wastewaters being discharge.

E. Base on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information is, to the best of my knowledge and belief, true, accurate and complete.

This section must be signed by the same responsible person who signed the accompanying permit application or certification as per 40 CFR 122.22.

Signature _____

Date 12/20/01

disk/Antiform
6/24/98